BUILDERS & CONTRACTORS MATERIALS

AND

SUPPLIES

Alex. Bremner Limited

MONTREAL.

Builders and Contractors Materials and Supplies

Cable Address
"Bremner, Montreal"
Western Union Code

Alex. Bremner Limited

Established 1872
Incorporated 1909

Manufacturers and Importers
Montreal

Head Office:

100 Bleury Street, Montreal

Private Telephone Exchange
connecting all Departments

Main 8460

□

West End Yard and
Rocalite Mill:

500 St. Ambroise Street
St. Henri

Telephone: West 2295

□

North End Yard:

De L'Épée Street and C.P.R. Track
Outremont

Telephone: Rockland 1600

□

East End Yard:

Fourth Avenue and C.N.Q. Track
Maisonneuve

Telephone: Lasalle 769

To Architects, Contractors and Builders

IN preparing this Catalogue for handy reference by the Building Trade, we have included lines of supplies which have proved, by years of experience, that they are first-class in every respect.

Our facilities for delivering goods by teams and motor trucks or for shipment by rail or water are up-to-date. Our distributing yards, located in different parts of the City and Suburbs and containing complete stocks, reduce the cost of cartage and ensure prompt delivery.

For country shipment our sidings on the following Railways: C.P.R., G.T.R., I.C.R. and C.N.Q., enable us to load cars for any point expeditiously.

Our extensive Sand properties, which are efficiently equipped with the latest power loading machinery and appliances, enable us to fill orders without delay.

Our methods appeal to all Contractors and Builders who appreciate particular and immediate attention.

Our Rocalite Hard Wall Plaster is manufactured in our own Mill, of carefully selected ingredients, and under the supervision of a competent Superintendent.

Our business, established in 1872, has steadily increased every year.

We take this opportunity of thanking those who have enabled us to achieve this gratifying result, and trust for a continuance of their support, which we shall ever endeavor to merit.

Yours respectfully,

Alex. Bremner Limited

Montreal, May 4, 1914.

Salt Glazed Vitrified Sewer Pipe

Straight Pipes

Y Pipe

¼ Bend, also made in ⅛

Siphon

Single Branch

Cesspool

Single Square

Buchan Trap

Double Branch

Double Siphon

Double Square

Running Trap

Hand Hole Trap

Double Collar

1 foot, long side

Reducer

Increaser

Channel Pipe

Carrying Capacity of Sewer Pipe

Size of Pipe in inches	Gallons per Minute, fall per 100 feet							
	1 in.	2 in.	3 in.	6 in.	9 in.	1 ft.	2 ft.	3 ft.
4	27	38	47	66	81	93	131	163
6	75	105	129	183	224	258	364	450
8	153	216	265	375	460	529	750	923
9	205	290	355	503	617	711	1006	1240
10	267	378	463	655	803	926	1310	1613
12	422	596	730	1033	1273	1468	2076	2554
15	740	1021	1282	1818	2224	2464	3617	4467
18	1168	1651	2022	2860	3508	4045	5704	7047
24	2396	3387	4152	5871	7202	8303	11744	14466
30	4187	5920	7252	10257	12580	14504	20516	25277

When the area to be drained and the fall of the sewer per 100 feet are known, the above table will show the number of gallons per minute the respective sizes of pipes will accommodate.

Statistics show the maximum rain-fall to be about one inch per hour, except during very heavy and exceptional storms. One inch of rain-fall gives 22,633 gallons per hour for each acre, or 377 gallons per minute per acre.

Experience proves that, owing to various obstructions, not over 50 to 70 per cent of the rain falling will reach the sewer within the same hour, and due allowance must be made for this fact in determining the size of pipe required, as severe storms are usually of short duration.

Standard Sewer Pipe

List of Sizes

Inside Diameter	Thickness	Weight per foot	Depth of Socket
4 inch.	½ inch.	10 lbs	2 inch
6 "	⅝ "	16 "	2¼ "
8 "	¾ "	23 "	2¼ "
9 "	⅞ "	28 "	2¼ "
10 "	⅞ "	33 "	2¼ "
12 "	1 "	43 "	2¼ "
15 "	1⅛ "	60 "	2½ "
18 "	1¼ "	85 "	2¾ "
20 "	1⅜ "	105 "	3 "
24 "	1⅝ "	140 "	3 "
27 "	2¼ "	220 "	3½ "

Double Strength Pipe

Inside Diameter	Thickness	Weight per foot	Depth of Socket
15 inch	1¾ inch	70 lbs	2½ inch
18 "	1½ "	100 "	2½ "
20 "	1⅝ "	138 "	3 "
24 "	2 "	190 "	3¼ "
27 "	2¼ "	220 "	3½ "

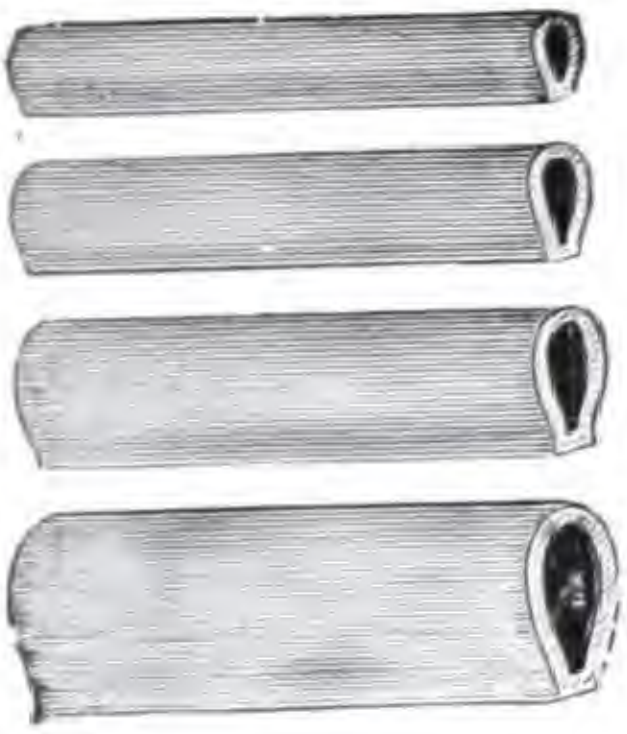
List prices and discounts on application.
Order by name designated on List.

Invert Blocks for Bottom of Brick Sewers

Single Ring.
Weight, 25 pounds per foot.

Double Ring.
Weight, 45 pounds per foot.

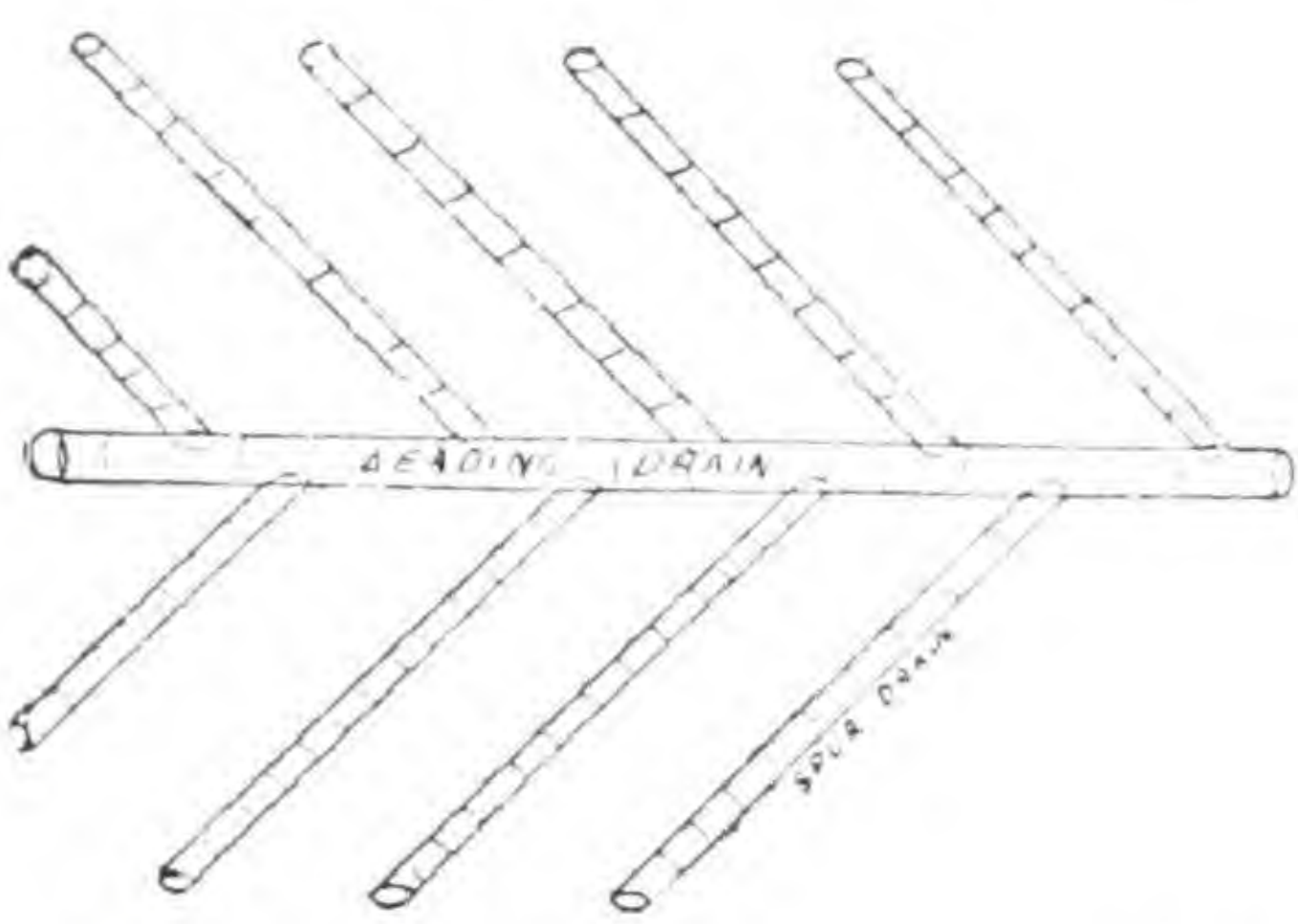
Field or Farm Tiles



Inside Diameter	Weight each
3 inch	5¾
4 "	8
5 "	8½
6 "	13
7 "	15
8 "	17½

Directions for Laying Tiles

Lay in rows from 18 to 30 feet apart and 2 to 3 feet deep, according to level and nature of ground to be drained. In laying tiles, a thin coating of straw should be thrown over the top to prevent pores from becoming clogged. A grade of not less than 1 inch to 15 feet should be given.



A few of the advantages of Tile Drainage

Tiles will not rot.
They will not clog if properly laid.
There is no lost surface, as with ditches.
Land may be seeded earlier.
The work is lighter on horses and implements.
Soil being free and open, aids the growth of roots.
Less seed is required than where land is undrained.
The seed starts to grow at once; whereas, where wet or low land is undrained the starting of seed is uncertain.
The speedier growth of crop will hinder weeds.
The straw will be brighter and stiffer.
There will be a larger yield and better quality.

Chimney Vents or Flue Linings

Round

Inside Diameter	Outside Diameter
6	7½
8	9½
9	10½
10	12
12	14
15	17⅛
18	20⅞
20	23
24	27

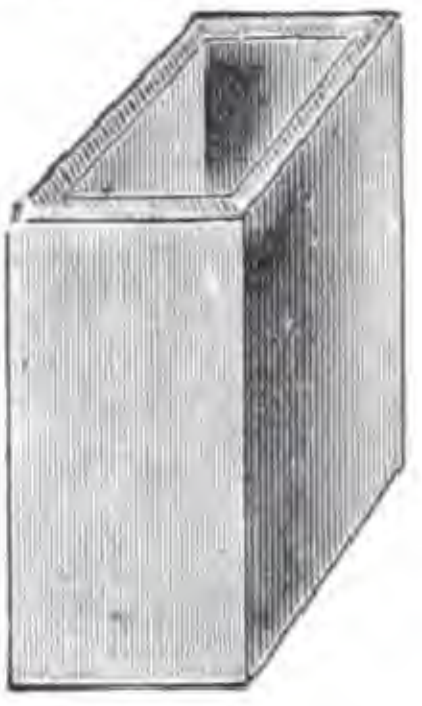
With 7 inch Stove-pipe hole

Chimney Vents or Flue Linings

Square and Oblong

Square

Inside Measure	Outside Measure
6¾ x 6¾	8½ x 8½
7 x 11	8½ x 13
8 x 8	10 x 10
11 x 11	13 x 13
14 x 10	16 x 12
18 x 14	20 x 16



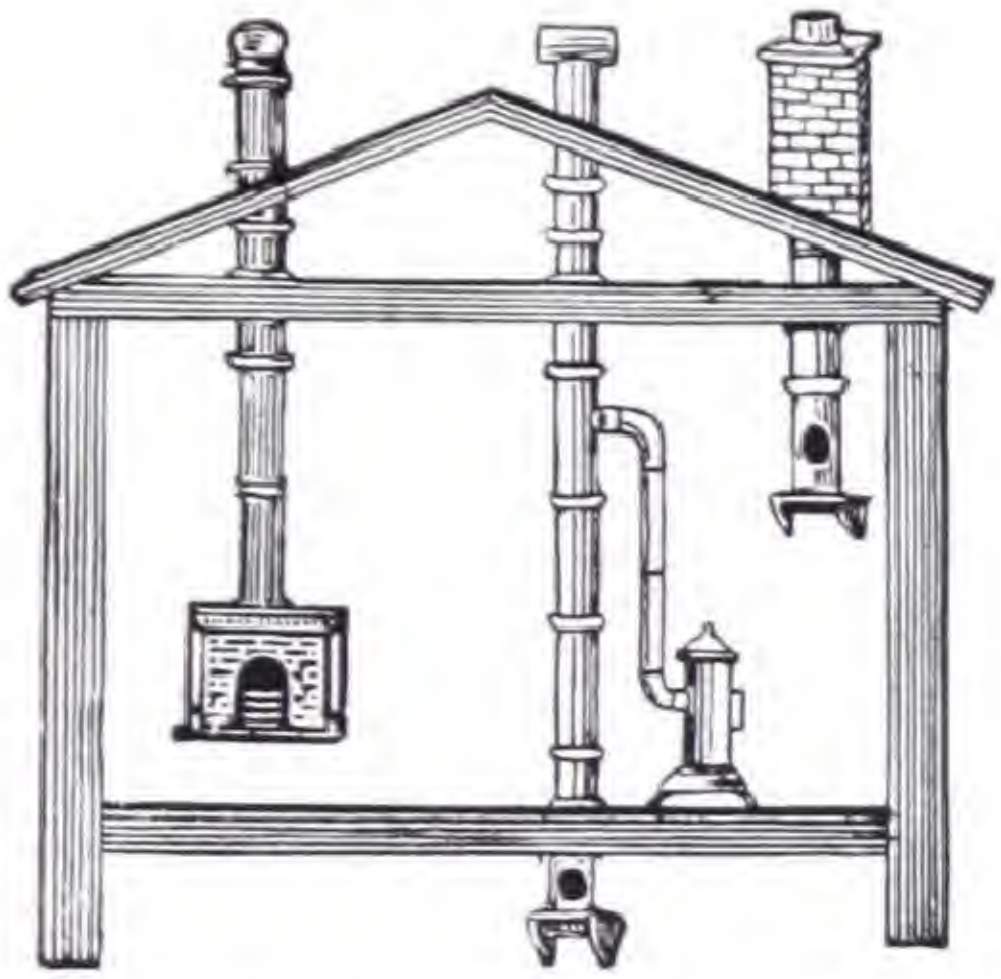
Oblong

Also with hole in side for stove-pipe.

Pipe Chimney

Where brick work is not used

3 foot lengths



Showing Pipe in use.

Pipe Chimneys have come into very general use and have given entire satisfaction. Pipes make a more perfect chimney than bricks, a smooth round bore being the best possible form for a smoke flue. They are quickly and easily put up by any intelligent person.

The pipes are generally set with socket end up, but can be set down, thus giving the best opportunity to make joints tight with mortar or cement.

Where no fire-places are used it is not necessary to have the pipes extended to the floor, but the chimney may be started at any point in the first or second story by making a firm bearing for the bottom pipe at the desired point on a strong shelf or bracket securely fastened to the wall. Where the chimney comes through the roof, a piece of tin or sheet-iron should be fitted closely around the pipe and plastered up tight with roof cement, to prevent leakage.

These pipes are 7 inch inside diameter and 3 feet long. The tee has 7 inch side opening, which is the correct size for an ordinary stove-pipe.

These pipes are made of pure fire clay They are unglazed, in order to better withstand the action of heat on one side and cold on the other.

Concrete Chimney Blocks

THE uniformity of each size of these blocks renders their adjustment easy, simple and perfect, and dispenses with the employment of skilled labor.

Concrete Chimney Blocks are made in the following sizes:

Inside Measure	Outside Measure
8 x 8 inches	14 x 14 inches
8 x 12 "	14 x 18 "
8 x 16 "	14 x 22 "
10 x 10 "	16 x 16 "
12 x 12 "	20 x 20 "

Also with round hole for stove-pipe and square hole for clean-out door.

Concrete Caps for complete chimneys, for all the foregoing sizes.

Chimney Tops

Brown Glazed Earthenware

Very durable and ornamental

THE Windguard is the only chimney top made that will prevent the wind from blowing down the chimney and that will, when the wind blows, create an upward draught. When this top is used, the stronger the wind the stronger the draught, hence the better your fire.

Windguard

No. 30. 40 in. high, 14 in. base, 9 in. flue.
Weight, 107 lbs.

No. 40. 40 in. high, 18 in. base, 12 in. flue.
Weight, 120 lbs.

Windguard

No. 31. 30 in. high, 9 in. flue.
Weight, 67 lbs.

Chimney Tops

White Unglazed

Very durable and ornamental

No. 78. Round.

For 9 and 12 inch Round Vents.
Heights, 2 ft., 2½ ft., 3 ft.

No. 32. Round.

For 9 and 12 inch Round Vents.
Heights, 2 ft., 2½ ft., 3 ft.

No. 85. Octagon.

For 9 and 12 inch Round Vents
Heights, 2½ ft., 3 ft., 3½ ft., 4 ft.

Perfect Wall Coping

A Real Wall Protection

Cannot Rust or Corrode

THIS coping, being salt-glazed and vitrified, makes a superior and more lasting covering for exposed walls than any other material now in use.

Sizes—9, 13, and 18 inches.

Corners, Angles and Closed Ends three times the price per foot of straight coping.

List prices and discounts on application.

□

SO build that your work will be an expressive monument of your character and genius.

Cast Iron Gratings

For Pipes open to surface, to prevent entrance of gravel, etc.

Round.

5 in. Diameter fits inside of collar of a 4 in. Drain Pipe.

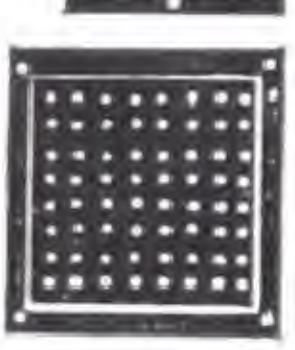
7½ in. Diameter fits inside of collar of a 6 in. Drain Pipe.

10½ in. Diameter fits inside of collar of a 9 in. Drain Pipe.

Square.

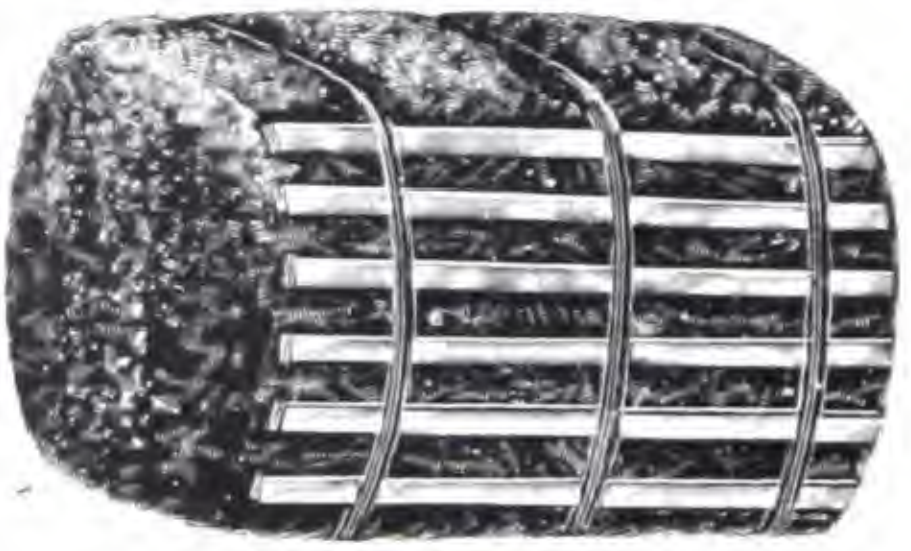
5¼ x 5¼ inches.

7 x 7 inches.



9½ x 9½ inches.

Oakum



In bales of 50 lbs. each.

Chimney Caps

Cast Iron

With one round hole

24 x 24, with 12 inch hole.
30 x 30, " 12 " "
30 x 30, " 15 " "
32 x 32, " 12 " "
32 x 32, " 15 " "

With two round holes

37 x 24, with 12 inch holes.
40 x 24, " 12 " "
44 x 30, " 12 " "
46 x 30, " 15 " "
50 x 30, " 15 " "

With one square hole

20 x 20, with hole 8 x 8
30 x 28, " " 8 x 12
36 x 28, " " 8 x 16
32 x 32, " " 12 x 12
32 x 32, " " 12 x 16

With two square holes

40 x 36, with holes 8 x 16
57 x 30, " " 8 x 16

Sizes not on this list made to order on short notice.

Allow chimney cap to project two inches over the chimney, and thus protect the brick work.

Sweep Hole Doors

Cast Iron

9 x 9	inch	15 x 15	inch
10 x 12	"	18 x 24	"
12 x 12	"	24 x 24	"

Stove Pipe Rings

Cast Iron or Tin

In the following sizes:

Tin Rings

Inside Diam.	Depth
7 in.	4 in.
7 "	5 "
7 "	6 "
8 "	6 "
9 "	6 "
10 "	6 "
12 "	6 "

Cast Iron Rings

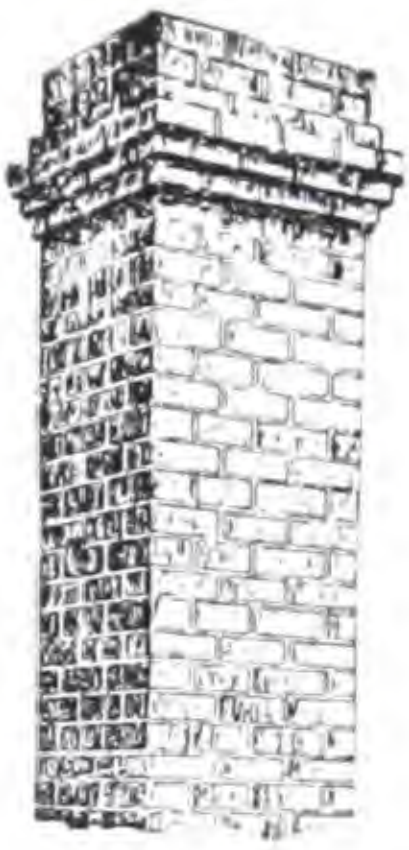
Inside Diam.	Depth	Weight
7 in.	4 in.	3 lbs.
7 "	5 "	5 "
7 "	6 "	7½ "
8 "	6 "	8 "
9 "	6 "	9 "
10 "	6 "	11 "
12 "	6 "	14 "

Special sizes made to order.

Mortar Color

No Mortar Color used.

Hardens the Mortar and Prevents Crumbling



Mortar Color used.

In following colors:

Red (Dry)	400	lbs.	per	barrel
Brown	400	"	"	"
Buff (Dry)	375	"	"	"
Black "	100	"	"	"

Directions for Using

To ascertain the exact amount of color necessary to obtain the desired shade in any work, experiment by using small quantities of each material until the shade is secured; then add the same quantity of color to the same quantity of mortar each time when mixing.

Thoroughly mix the color.

Never add the color to mortar before the lime is thoroughly slacked and cooled.

45 to 50 lbs. Red, Brown or Buff will color sufficient mortar to lay 1000 bricks with spread joints.

These colorings are very strong and extra finely ground. A smaller quantity is required than where inferior or coarsely ground are used.

Rocalite

Hard Wall Plasters

ARE manufactured in our own Mill, which is modern in every detail and fully equipped with the latest and most perfect machinery.

Rocalite is not a substitute, but an improvement on common mortar for plastering purposes The several ingredients that enter into the manufacture of Rocalite are carefully weighed and mixed by automatic machinery, which ensure its absolute uniformity in quality and texture.

We manufacture Rocalite in two styles:

Ready Mixed, sand included
Pure, without sand

There is nothing experimental about Rocalite. It is a perfect Wall Plaster worked out with scientific accuracy from proper materials, by intelligent skill and with the definite purpose of supplying the best possible Wall Plaster.

It is recognized as the standard plastering material by architects, contractors and proprietors.

□

THE cheapest is never the best, but the best is always the cheapest. This is not fiction ; it is fact

A Few of the Merits of

Rocalite

Hard Wall Plasters

ROCALITE is made of Plaster Paris, (calcined gypsum rock) instead of from slaked lime as in ordinary mortars. It makes a wall many times stronger than is possible with the best lime mortar.

Rocalite sets in about two hours, and, as it requires much less water in the mixing than ordinary plasters, dries quickly. The water on coming into contact with the gypsum dissolves into gases and starts crystallization, which is the natural mechanical process of setting up or hardening.

As the gypsum crystals form and unite, the surplus water is forced to the surface of the wall, where it quickly evaporates.

Tensile strength with quick setting and drying mean strong walls and rapid building—two most important points in modern construction.

Rocalite will not of itself crack or shrink, neither will it loosen and fall off, even from leakage of water pipes or roofs.

The quick setting and drying qualities of Rocalite permit carpenter work to be completed without the delay caused by slow drying mortars.

The density and strength of Rocalite make it a valuable fire resistant. The hottest fire will not cause it to fall off and expose the woodwork to the flames.

The extraordinary hardness of Rocalite makes it germ and vermin proof.

□

ECONOMY is not merely spending the least money; it is getting the most for your money.

Rocalite Ready Mixed

Sand Included

IS prepared complete at our Mill, and is ready to use at the building by the addition of water only. It prevents the possibility of the laborer at the building determining the quality of the material for this most important branch of building construction.

The ingredients in Rocalite Ready Mixed are automatically weighed and are thoroughly mixed by fast revolving machinery that assures a perfect mixture. The sand is clean, sharp, properly screened and thoroughly dried.

Rocalite Ready Mixed, being complete and ready for using, removes the risk of adding inferior quality o Sand, of incorrect quantity, and of the ingredients being inadequately amalgamated.

Rocalite Sanded is made in mixtures to suit the following different classes of work:

First coat on wood lath.

First coat on metal lath.

Brick or Terra Cotta.

Second Coat or Browning.

Rocalite is put up in bags of 80 lbs each, 25 bags to a ton.

□

EXPERIENCE has demonstrated that the rule of thumb is a failure: the development of genius and the discoveries of science have driven it into oblivion. In this age of progress we are not satisfied with the crude methods of our predecessors.

Rock Wall
or
Rocalite Neat Wall Cement

IS made of the same high grade ingredients as Rocalite Ready Mixed, with the sand omitted. It is intended for use where good sand can be readily obtained and to save freight when shipping long distances. This Wall Cement is put up in bags of 100 pounds each and requires the addition of clean, sharp sand, free from loam, in the following proportions:

For wood or metal laths, one part neat Rocalite to two parts sand by measure.

For brick or terra cotta walls, one part Rocalite to three parts clean, sharp sand by measure.

Do not add any Lime

For finishing or White coat, we recommend

Tiger White Rock Finish

or our

Ready Mixed Sand Float Finish

which is ready for using by the addition of water only.

This finish gives a slightly roughened surface and is specially intended for public buildings, club rooms, etc.

It is not suitable for papering.

□

General Directions for using Rocalite Hard Wall Plasters

IN using Rocalite Hard Wall Plasters it is absolutely necessary, in order to obtain first-class work, to have the laths spaced sufficiently far apart to permit the Rocalite to form a good clinch behind the lath. We recommend three-eighths of an inch.

The grounds require to be deep enough to insure a proper thickness of Rocalite being applied.

Mix with a common hoe in a flat, tight box, (about 6 feet x 3 feet x 1 foot), slightly raise one end of the box, pour water into the box, empty Rocalite into the higher end, then hoe it into the water, allowing it to absorb the water; if too moist, add more dry Rocalite.

Mix only such quantity as can be used in one hour. The mixing box must be thoroughly cleaned after each mixing.

Three Coat Work

For Three Coat Work on either Wood or Metal Lath, apply Rocalite first coat with sufficient pressure to clinch back of the lath; thoroughly cross scratch the surface, to form a good key for the second or browning coat.

After the first coat has set apply the second coat, using enough to fill up flush to grounds; make walls straight and plumb with rod; darby to a rough surface, making corners and angles true.

When the work has thoroughly set, apply Finish. See pages 23–25.

Two Coat Work

For Two Coat Work on Wood or Metal Lath, apply as for three coats, omitting the second or browning coat.

For Brick and Terra Cotta Walls

We prepare a special mixture for this purpose, to be applied in the usual manner. Be sure that the wall is thoroughly wet before applying.

Tiger Brand

White Rock Finish

A Pure Lime Putty in Powder Form for the Skim, Third or White Coat, or for Running Cornices.

MAKES smoother and whiter walls.
Will not craze or chalk.
No lumps to pick out.
Will not pit or pop.

Tiger White Rock is screened as fine as flour, and thereby saves time, labor and waste.

Tiger White Rock will cover more surface in white coating than an equal quantity of lump lime, and spreads easier, smoother and with less trowelling.

Tiger White Rock can be soaked in the building where the wall is to be white coated or cornice run, and in about one-twelfth the time necessary for lump lime. It dispenses with street permits.

Tiger White Rock sufficient for several rooms can be soaked in a mortar box 6 x 4 x 1.

In gauging, Tiger White Rock requires one-third to one-half less Calcined Plaster than is necessary for lump lime.

Tiger White Rock will not work hot or burn plasterers.

Directions
for using
Tiger Brand White Rock Finish
White Coat or Cornice Work

INTO an ordinary mortar box put four or five inches of water. After which, dump in the Finish, and as it runs from the sacks distribute it evenly around into the water. Keep adding water as Finish is added. If the water is being drawn from a hose, as the Finish is spread in, keep sprinkling it. This lets the water get thoroughly at the material, giving it a good chance to soak, and avoids the necessity of hoeing. It should not be hoed unless absolutely necessary. Enough water should be added, so that when left to stand the material is in a wet, soft mass. This means about five buckets of water (15 or 16 gallons) to every 100 lbs. of Finish. To insure the best results, let Tiger White Rock stand and soak over-night. Soak enough Finish the night before to last through the following day. Soaking over-night is sufficient. If not used it can be left to soak longer, without any harm being done.

When going to use, put an ordinary amount of this putty on a gauging board. If sand is to be used in the white coating, sprinkle the putty at this time with the desired amount of sand; then circle the putty, fill in the centre with water and gauge with calcined plaster. In the very best work the amount of calcined plaster added should be one-quarter to one-third the amount of dry finish used. Less calcined plaster is needed than in the ordinary lump lime putty. After the calcined plaster is well worked in by mixing on the board, the material is ready for using.

In applying the Finish, lay it on tight and trowel down with brush and water. Very little trowelling is necessary. If base coat is bone dry, wet it down before applying the Finish; otherwise, like any lime, it will work stiff.

Tiger Brand White Rock Finish

IS distinctly a Twentieth Century product. Its advantages, briefly summed up, are as follows:

It is scientifically slaked under perfect conditions.

It has great tensile strength.

It is easily handled.

It will keep indefinitely.

It is a labor saver.

It will produce perfect results wherever used in the building industry.

Tiger Brand White Rock Finish has been successfully used as a plastering material since 1898. Many of the finest and most imposing structures in this country are plastered with it.

"How much will Tiger Brand White Rock Finish cover on white coat work?" is a question frequently asked. The covering capacity of this or any similar material depends on the thickness to be applied, the skill of the man applying it, and the straightness of the base coat. When a first-class straight job is to be done Tiger Brand White Rock Finish will cover 700 square yards to a ton. On work that does not have to be straightened and where the white coat is to be applied thin, Tiger Brand White Rock Finish will cover 800 or more square yards to a ton. These figures are taken from practical tests.

Tiger White Rock is put up in paper packages of 40 lbs each.

□

Standard Hydrated Lime

In Powder Form, retaining all the qualities of freshly burnt Lump Lime

STANDARD HYDRATE is made from selected high Calcium Lime perfectly hydrated to a fine white powder, and is suited for all classes of work where Lump Lime would be used.

For Laying Common Brick

300 lbs. Standard Hydrated Lime and 2000 lbs. Sand.

For Laying Face Brick

100 lbs. Standard Hydrated Lime and 350 lbs. Sand.

For Cement Brick Mortar

100 lbs. Standard Hydrated Lime.
4 bags Portland Cement.
1500 lbs. Sand.
Mix the Lime and Cement dry, then add the Sand.

For Waterproofing Concrete or Stucco

To each bag of Portland Cement add 25 lbs. Standard Hydrated Lime.
Mix dry with the Cement, then add the Sand.

For Whitewashing

Mix and apply as with ordinary Lump Lime.

Standard Hydrated may also be used for finishing or white coat on plastering.

From the fact that Standard Hydrated Lime has been carefully hydrated at our plant, we are confident that it will be a great labor saver, the difficult work of properly slaking the quicklime being entirely obviated.

Put up in 40 lb. and 100 lb. Sacks.

Lump Lime

We keep all our yards constantly stocked with good, fresh Lump Lime.

City deliveries are made in bulk; country shipments, in less than car loads, in bags or barrels. We have exceptional facilities for car load lots.

Calcined Plaster

HAMMER BRAND PLASTER OF PARIS is manufactured in New Brunswick, which is known to contain the finest Gypsum deposits in the world, from rock carefully calcined to secure uniform strength and setting.

Hammer Brand is admitted to be and has proved that it is superior in substance and manufacture to any in America.

Hammer Brand is made in the following grades:

F. In wooden barrels of 320 lbs. gross, and in paper bags of 75 lbs. each, 4 bags equal to a barrel.

FF. In wooden barrels of 320 lbs. gross.

DENTAL PLASTER. In half barrels of 160 lbs. gross and in barrels of 320 lbs. gross.

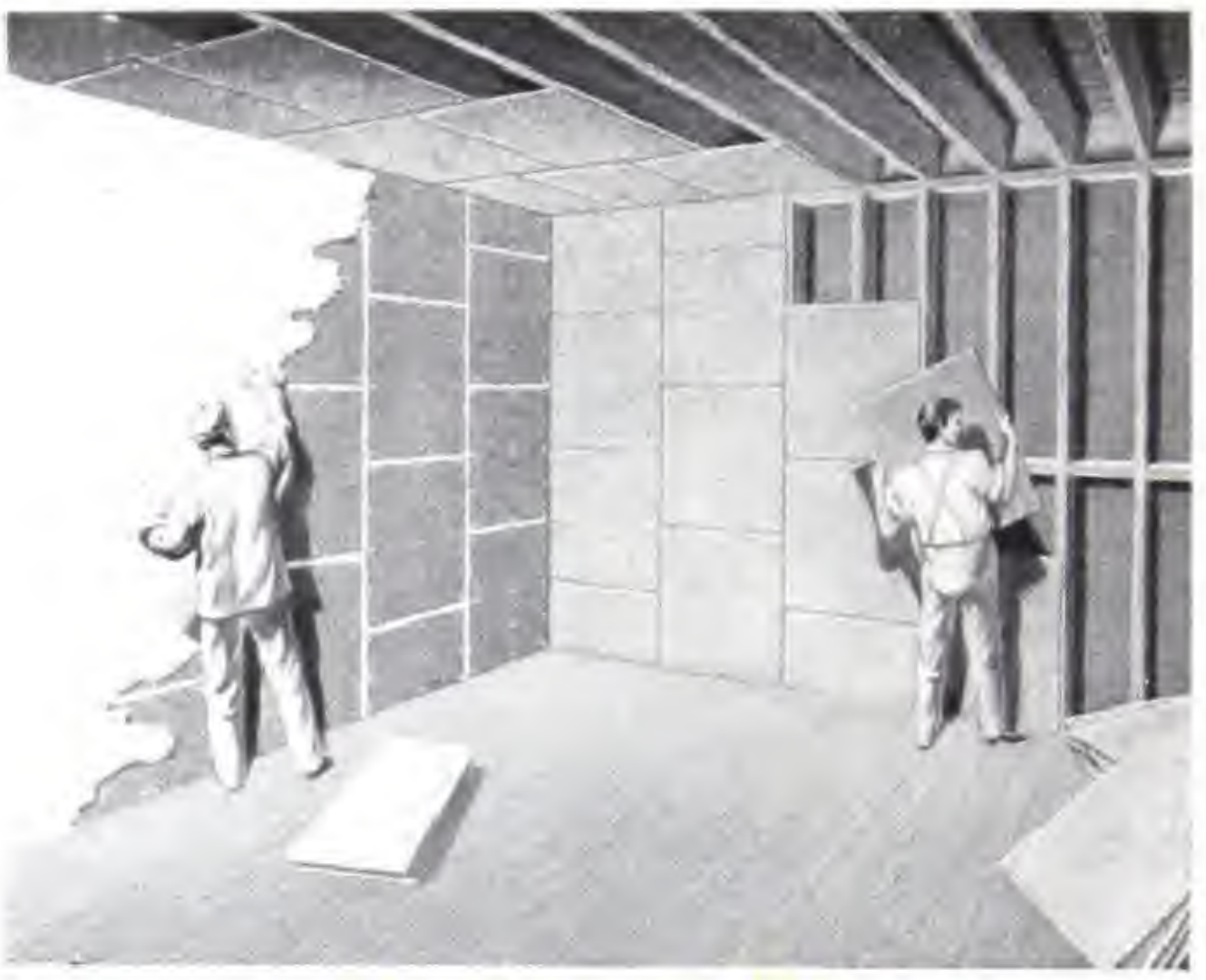
LAND PLASTER. In jute bags of 100 lbs.

Plaster Hair

Picked, washed and dried.
In bags of about 20 lbs. and bales of about 175 lbs.

English Whiting

Ordinary Ground.
Ordinary Lump
Gilders' Ground
Paris White Ground.
In barrels of 333 lbs. gross.



Sackett Plaster Board

Supersedes Lath

IS composed of alternating layers of Wool Felt and Calcined Plaster, which have a natural affinity and combine perfectly, resulting in a solid board, firm, yet sufficiently elastic.

Sackett Plaster Board presents a firmer and truer plastering surface than wood lath or any other lath, and the natural affinity between the materials in the board and in the plastering material makes an absolutely perfect bond.

The application of Plaster to Sackett Plaster Board effects an inseparable body of Boards, Plaster and Finish. A finished wall of Sackett Plaster Board costs no more than a good grade of wood lath and plaster.

Sackett Plaster Board combines lathing and fireproofing in one inexpensive commodity. It expedites construction, is a non-conductor of sound, and keeps out the cold.

Directions
for using
Sackett Plaster Board

FOR walls, set the studding 16 inches from centres; for ceilings, either 8 or 12 inches from centres. Nail the boards, which are 32 x 36 inches, direct to the studding.

For buildings of slow burning construction, nail boards solid to wooden surface.

In nailing, use 1¼ inch wire nails with large head, set 4 to 6 inches apart, driven home firm and tight, to prevent any working under the Plaster Coat.

Space boards ¼ of an inch apart, breaking joints horizontally on the walls and at right angles with the furring on the ceiling.

Do not wet the Boards before applying the plaster finish. Adhesion between the Plaster Coat material and the dry Plaster Board is perfect.

The best results are obtained by applying to Sackett Plaster Board a brown coat of Rocalite Hard Wall Plaster, ¼ to ⅜ of an inch thick. When this is thoroughly set, finish with a thin coat of Tiger White Rock.

Nails for Sackett Plaster Boards

made specially with large heads, kept in stock. Supplied in kegs of 100 lbs, or in smaller quantities when desired.

Gypsum Block

The Modern Fireproofing Material

GYPSUM BLOCK is composed of pure Gypsum Plaster, bonded with a high-class fibre, and made into block form, twelve inches in height, twenty-four inches in length, and two to eight inches in thickness.

It is used for fireproofing structural steel, for wall furring, partitions, book tile, insulation from heat and cold, and for deadening sound.

Gypsum Plaster, or Plaster of Paris, has long been recognized as a most efficient fireproofing material, and has been used for lining fireproof safes for many years.

Some of the Advantages of Gypsum Block

Gypsum Block is a non-conductor of heat of the highest efficiency known commercially.

Gypsum Block does not expand under heat.

Gypsum Block is light in weight (half that of terra cotta or clay), which effects a saving in the weight and cost of structural steel.

Gypsum Block can be laid very rapidly, on account of its size and light weight.

Gypsum Block can be plastered as soon as set, and decorated as soon as plastered, as there is no discoloration of the plaster from rust or other reason caused by the block.

Gypsum Block resists the action of water under average actual fire conditions.

Gypsum Blocks, being of uniform thickness, lay smoothly. This makes a difference in the amount of plaster required. Plasterers acquainted with them give a lower price than for plastering any other form of fireproofing.

Gypsum Block can be sawn at will and fitted, making all joints close and snug. No ragged breaks or edges to be filled in.

Gypsum Block holds nails well, thus saving the expense of the carpenter work for the grounds.

Gypsum Block is a non-conductor of cold. It makes the building warmer in winter and cooler in summer.

Gypsum Block is an insulator of sound.

Gypsum Block is sanitary and vermin proof.

Gypsum Block will last forever.

Gypsum Fireproof Blocks transmit less than five per cent. of the temperature on the fire side to the outer surface. They successfully resist the action of water after a fire, remaining plumb and true, and require replastering on the fire side only for complete restoration.

Sizes and Approximate Weights per square foot

2 x 12 x 24 Furring Hollow Back	7 lbs.
2 x 12 x 24 Hollow	9 "
2 x 12 x 24 Solid	9 "
3 x 12 x 24 Hollow	10½ "
3 x 12 x 24 Solid	12 "
4 x 12 x 24 Hollow	14½ "
6 x 12 x 24 Hollow	17½ "

Perfect Plaster Corner Bead

Made from Galvanized Steel Sheets

Sanitary

Everlasting

Perfect Alignment

Fireproof

Economical

Easily Applied

In 4, 5, 6, 7, and 8 foot lengths.

Perfect Plaster Corner Bead, being absolutely rigid and straight, forms an indestructible corner. Its true and perfect alignment preserves and increases the beauty of the decoration.

Perfect Expanded Metal Lath

26, 24 and 23 gauge, painted red.

24 and 23 gauge galvanized.

One pound of No. 14 wire staples will attach ten square yards of lath.

Specification

Girth of Laths	26 Gauge	24 Gauge	23 Gauge
Size of Sheets, inches	18" x 96	18" x 96	18" x 96
Weight per square yard, lbs.	2	$2\frac{1}{4}$	3
Number of sheets per bundle	11	11	11
Number of square yards per bundle	15	15	15
Number square yards per sheet	$1\frac{4}{11}$	$1\frac{4}{11}$	$1\frac{4}{11}$
Weight of each bundle, lbs.	30	43	49
Exact size of mesh, inches	$\frac{3}{8}$ x $\frac{1}{2}$	$\frac{3}{8}$ x $\frac{1}{2}$	$\frac{1}{2}$ x $\frac{3}{4}$

Actual length of sheet of Perfect Lath is 97 inches.

We charge for 96 inches only, as above schedule.

The additional inch means one row of end staples for two sheets. It also means two inches possible error in location of end stud without waste of lath.

Portland Cement

Facts About Concrete

AS a building material, concrete has proved that it is in many ways far superior to wood, brick or stone. When properly made, concrete is everlasting, its strength increasing with its age. It is fireproof and sanitary. It can be moulded to any shape and needs no repair. It dispenses with the necessity of skilled labor.

Concrete is a mixture of cement, sand and stone (or gravel) with water, the proportion of each varying with the purpose for which the concrete is intended. In this semi-liquid state it is placed in moulds (called "forms") of any desired shape, and after remaining in this condition from thirty minutes to one hour it begins to harden. During this hardening process concrete must not be disturbed, as any movement of the particles will destroy the cementing strength. At the end of from twelve to twenty-four hours, the concrete will have become so hard that it cannot be dented by the hand, and at the end of a month it will be as hard as rock and will continue to increase in strength.

The quality of the concrete depends largely on the quality of the materials from which it is made. Any reliable brand of Portland Cement can be used with confidence, as it is the practice with all first-class manufacturers to accurately test and proportion the ingredients from which the cement is made, and after its manufacture to test it to see that it fulfils the requirements established by the leading engineering societies of the world.

Proportioning

The strongest concrete is that in which all the air spaces (called "voids") in the stone are filled with sand and all the voids in the sand are filled with cement. As the amount of voids varies with each load of sand or stone, add a little more sand and cement than will just fill the voids.

A bag of cement contains one cubic foot. Therefore, taking the cement as a basis for a 1 cement 2 sand 4 stone mixture, the quantities of material required are one bag of cement, two cubic feet of sand and four cubic feet of stone.

The following mixtures are recommended for the respective classes of work:

1: 2 : 4 for re-inforced concrete of all kinds, and where the concrete is to be waterproof or subject to shocks and vibrations, such as engine foundations.

1 : 2½ : 5 for floors, walks, walls, small foundations, and general work.

1 : 3 : 6 for heavy walls and foundations, and other structures not subject to excessive loads, jarring and vibrations.

Mixing

When the size of the work warrants it, a power mixer is to be preferred; but for small jobs it will generally be cheaper to mix the concrete by hand. For this purpose the following tools are needed: Mixing board, plank runs, measuring box for sand and stone or gravel, shovels, wheelbarrows, rake, water barrel, water-bucket, tamper, garden spade, and sand screen (one-quarter inch mesh).

First, place all materials convenient to the mixing board, several bags of cement at one end and the sand and stone piles at the other. Spread the sand in a layer four inches thick; spread the cement over this and mix together dry until a uniform color is obtained. Level the mixture and spread the stone on top. Add about three-fourths of the required amount of water, dashing it over the stone. Mix until the mass is of a uniform color, adding extra water to any dry spots.

Where gravel is used, spread it out and wet it thoroughly with about three-fourths the required water. Spread the cement evenly over the wet gravel and mix, adding water to the dry spots until the mass becomes uniform. Thorough mixing is absolutely essential.

Concrete can be divided into three classes, according to the amount of water added—wet, medium and dry.

A wet mixture is one that is too thin to be carried on a shovel. It is used for thin walls and places where the concrete must be poured. It is preferred for reinforced concrete.

A medium mixture is just wet enough to make it jelly-like. Used for foundations, floors, etc.

A dry mixture has the consistency of damp earth, but should contain enough water so that tamping will bring the water easily to the surface. It is used for foundations, etc., and places where it is important to have the concrete "set" quickly.

Where there is any doubt, it is safer to use too much water than too little.

Placing

Concrete should be placed in the forms as soon after mixing as possible, and is usually deposited in layers six inches thick. Where a wet mix-

ture is used, it can be puddled and air spaces removed by working a broom handle up and down and around it. Where a medium or dry mixture is used, it should be lightly tamped until water appears on the top and no stones are left uncovered.

As most concrete work is done in the summer, the fresh or "green" concrete should not be allowed to dry out too quickly. Protect the concrete from the sun and sprinkle it twice daily for about a week. This is done so that the surface will not dry out quicker than the centre of the mass. When the forms can be left on during this period the sprinkling may be omitted, but the top should be protected as well as the sides.

When the concrete is likely to be subjected to freezing weather before it has had a chance to harden from twenty-four to forty-eight hours, it is advisable to use a dry mixture and also to heat the sand, stone and water to about seventy-five or eighty degrees before mixing. This extra heat, together with the small amount of water, causes the concrete to "set" much sooner, but the forms should be left on considerably longer and all exposed surfaces should be covered with about twelve inches of hay or straw to keep in the heat.

Floors

Interior floors, such as those for barns, cellars, etc., do not need contraction joints, as they are subjected to a practically constant temperature and can be considered as a single slab.

The following are approximately the quantities of materials required to lay 100 square feet of concrete walk or floor:

Mixture	Thickness	Cement	Sand	Stone
1 : 2 : 4	4 ins.	2 09 bbls.	0 54 cu. yds.	1 08 cu. yds.
	5 "	2 61 "	0 68 "	1 35 "
	6 "	3 13 "	0 82 "	1 63 "
1 : 2½ : 5	4 ins.	1 72 bbls.	0 57 cu. yds.	1 14 cu. yds.
	5 "	2 15 "	0 71 "	1 42 "
	6 "	2 57 "	0 85 "	1 90 "
1 : 3 : 6	4 ins.	1 47 bbls.	0 58 cu. yds	1 16 cu. yds.
	5 "	1 84 "	0 73 "	1 45 "
	6 "	2 20 "	0 87 "	1 74 "

The quantities to make a cubic yard of concrete are:

Mixture	Cement	Sand	Stone
1 : 2 : 4	1 69 bbls.	0 44 cu. yds.	0 88 cu. yds.
1 : 2½ : 5	1 39 "	0 46 "	0 92 "
1 : 3 : 6	1 19 "	0 47 "	0 94 "

Cement Sidewalks

The first thing essential for a good cement sidewalk is the foundation, which is obtained by making an excavation 15 to 18 inches deep and filling it with thoroughly tamped coarse gravel, broken stone or cinders, to within 4 inches of the intended height of the completed walk. After placing in position a 4 inch frame-work, fill it with grout, consisting of crushed stone, sand and cement, sufficiently moistened to allow of its being packed solid by tamping down 1 inch, being careful to lay in separate sections or blocks of about 4 ft. by 5 ft. or 5 ft. by 5 ft. Before this layer has lost its moisture or becomes set, the top dressing, consisting of sand and cement, with enough water to make a stiff mortar, is laid and thoroughly tamped on to the grout. After troweling sufficiently to work the air out, strike the surface level with a float and cut carefully into blocks corresponding with those of the grout. The joints between the blocks are then finished with a jointer and the edges are rounded and finished with a edger; after which, the surface is rolled with an indention roller, which prevents the walk from becoming slippery and gives it a neat appearance.

Requisite tools illustrated on pages 70 to 75.

Walls

Concrete walls can be divided into two classes, those below ground for foundations, cellars etc., and those above for buildings, retaining walls, etc. All walls should have a base wider than the wall itself, extending below the frost line, about 4 feet below the surface. The base should be six inches thick and extend the same distance beyond each side of the wall.

The foundation should not be placed on soft or yielding soil. If such soil is encountered, excavate until a hard material is found and fill up with gravel to the frost line, compacting it well during filling. Cellar walls must be built to withstand the earth pressure behind them, but the thickness need not be as great as for retaining walls, since they are strengthened by the floor joists. The weight of the building also adds to the resistance to overturning. The thickness of the wall depends on the depth, but should not be less than ten inches. Where the earth is stiff and does not cave in it can be used in place of forms. In building walls for a cellar, underground cistern, or any other wall of this kind, the earth can be used as the outside form, and by leaving the bottom board off the inside form the concrete will run out, making a spread footing.

Retaining walls above the ground must be thicker than cellar walls, the thickness at the bottom being not less than three-eighths of the height. The thickness increases uniformly from the top to the bottom. In building a wall of this kind the part below the surface can be built with vertical sides, and that above ground with a vertical front face and sloping on the back.

Walls above the cellar should not be less than six inches thick, but a wall of this thickness should be re-inforced with one quarter-inch rods placed twelve inches apart vertically and horizontally, with extra horizontal re-inforcement at corners and over all openings. Sometimes, as in the case of barns, the concrete is only used for part of the wall, the upper part being wood. In this case the wood sill should be securely fastened to the concrete, by placing three-quarter inch bolts, heads down, in the concrete as it is placed, allowing about six inches to extend into the concrete and enough protruding to allow for the thickness of the sill and tightening of the nut.

The concrete should be mixed wet and not weaker than 1 : 2½ : 5, or, where the cellar wall must be water-tight, a 1 : 2 : 4 mixture should be used.

Bonding Old and New Concrete

Where the size of a job is too large to "place" all the concrete during one day, some method must be used to bond the new concrete to the old. The surface of the old concrete should be thoroughly wet and scrubbed clean of dirt and scum, and, while still wet, plastered with a thin coat of mortar of one part cement and one part sand, and concrete work started immediately. Where the work is to be water tight or to withstand water pressure, it is an added precaution to make a mechanical bond by imbedding timbers either square or V-shaped in the surface where the work leaves off, and removing timber before resuming work. Another plan is to partially imbed large stones or iron rods, which act as dowels when covered by the new concrete. But even where a mechanical bond is used, the surface should also be cleaned and plastered as above described.

Colored Concrete

There is no set rule as to quantity of color to be used, as local materials vary.

For desired shade, sample briquettes should be made.

In all cases, mix color dry with the material to be colored.

Atlas-White

Non-Staining Portland Cement

ATLAS-WHITE is a Portland Cement of the highest quality. It possesses the strength and physical characteristics of Portland Cement and passes all standard specifications for this material. In addition, it is White in color and is non-staining.

The architectural possibilities with the use of Atlas-White are unlimited. It can be used for exterior and interior decorative work; stucco work; in the preparation of mortars for setting marble, tile, brick, and stone; for facing concrete blocks; laying terrazzo floors; the manufacture of decorative concrete stone; for wainscoting of bathrooms, kitchens, etc.; and in fact any work requiring the use of Portland Cement where a white color is desired. Atlas-White Portland Cement is absolutely non-staining, and therefore it is a most excellent material for laying limestone, marble, or any fine textured stone.

As sand to a great extent affects the color of finished concrete work, we have prepared Atlas-White mixtures of Atlas-White Portland Cement mixed with pure white sand in equal proportions, ready for using with the addition of water, to supply the trade in localities where a white sand is not obtainable.

Atlas-White Mixture No. 1

is composed of one part Atlas-White Portland Cement and one part pure white silica sand thoroughly and intimately mixed. The sand in this mixture is of fine, even grain, and the mixture can be used as a mortar:

For Plastering on Concrete Walls, Exterior or interior.

For Floor Surfacing where a rich Mixture is required.

For use in making mortar for laying terrazzo and tile floors, and is also recommended for washing in joints, particularly of terrazzo floors, as more satisfactory than neat cement.

For setting ceramic mosaic tile, marble and wall tile of any description.

For interior work such as bathroom and kitchen walls, or any smooth white finish on perpendicular walls, the following formula is recommended :

Add 20 lbs. Tiger Hydrated Lime to each bag of Atlas Mixture No. 1.

This mixture has the following characteristics :

Its base is a true Portland Cement ; it is insoluble in water; it makes a hard and smooth surface with a glossy finish; it is easily applied.

Atlas-White Mixture No. 2

is composed of one part of Atlas-White Portland Cement and two parts of pure white silica sand thoroughly and intimately mixed. The sand in this mixture is graded in such a manner as to make a dense mortar. This is the mixture recommended in Standards of the National Association of Cement Users for Surfacing Concrete Sidewalks and Floors, also for Facing Concrete Blocks.

It is also the mixture recommended by the Associate Tile Manufacturers for Tile Setting, and for Floating and Buttering Wall Tile and the foundation for Terrazzo Floors.

It is also recommended for Cast Stone Work of every description, such as Window Sills and Lintels, Balustrades, Vases, Garden Furniture and Decorative work.

With the addition of ten pounds of Tiger Hydrated Lime to each Bag of Atlas-White Mixture No. 2, it is recommended as a mortar for laying white enameled brick, white terra cotta and any fine textured stone, such as Bedford Limestone, Marble or Granite, where, as an absolutely non-staining material, it has no equal.

Stucco

The growing demand for stucco throughout the country and the particular adaptability of Atlas-White Portland Cement for this character of work lead us to present recognized formulae for the proper handling and application of the materials:

Specification for Atlas-White Portland Cement Stucco

Atlas Portland Cement stucco can be used to cover wood, brick, stone or other building material, provided special precautions are taken in properly preparing the surface so that it will not crack or scale off.

As a rule, two coat work is sufficient ; the first or scratch coat to be composed of the following formulæ:

First Coat.—300 lbs. clean, graded Sand, 30 lbs. Tiger Hydrated Lime and 3 lbs. Plasterers' Hair or Fibre, to each bag of Atlas-White Portland Cement.

Or use, 10 lbs. Tiger Hydrated Lime and 1 lb. Plasterers' Hair or Fibre to each bag of Atlas-White Mixture No. 2.

Second Coat.—For smooth, white finish, 20 lbs. Tiger Hydrated Lime to each bag of Atlas-White Mixture No. 1.

For even granular finish, 10 lbs. Tiger Hydrated Lime to each bag of Atlas-White Mixture No. 2.

For application to metal lath the first coat must be well pressed into the lath, and after scratching with a trowel or stick to roughen, the surface must be allowed to dry at least twenty-four hours. Before the second coat is applied, the first must be thoroughly wetted down. The first coat should be not less than three-quarters to one inch thick and the second coat one-quarter inch to one-half inch thick. The first coat can also be made of regular Portland Cement and the second coat of Atlas-White with perfect success, which will materially decrease the cost on account of the cheaper price of the regular Portland Cement. Should one coat work be desired, use the formula for the second or finishing coat.

To apply stucco to brick or stone, the surface of the wall must be thoroughly cleaned and the wall flushed with clean water. One and a half inch coat of No. 2 Mixture is recommended.

Non-Staining Portland Cement

THE distinctive properties of this Non-Staining Cement have demonstrated its superiority.

Its color, when set, is permanent and regular, without any surface discoloration. It does not stain limestone, granite or marble, and brick and terra-cotta work are exempt from efflorescent white stains.

This Non-Staining Cement, mixed with good, clean sand, in the manufacture of artificial stone, building blocks, statuary, fountains, pergolas, and ornamental work, has the color and texture of the genuine stone and requires the closest scrutiny to distinguish it from the real stone. It does not stain in streaks.

Specifications

Architects generally specify the following:

Limestone and Granite set with mortar composed of one part Non-Staining Portland Cement and two parts of clean, well screened white sand, should be set with fine uniform joints in a full bed of mortar with from five to fifteen per cent. of lime putty added, according to the judgment of the mason, to make the mortar sufficiently plastic.

The brick backing of stonework should be laid in this Non-Staining Cement mortar throughout the wall and extended two feet above the stonework, to prevent the moisture of other mortars from staining the face work.

Coloring

To match terra-cotta, or for pointing, the desired shade can be obtained by the addition of mortar colors to this Non-Staining Cement.

It is not advisable to use Lime Putty, as it has a bleaching effect on the coloring matter.

Caen Stone Cement

THE texture and color-tone of Caen Stone is generally approved for mantels, balustrades and walls of vestibules and staircases, church arches, etc., but it is impossible to procure blocks of the stone from the quarries in France, except at practically prohibitive expense, or to find in this country any other stone producing a like pleasing effect at a more moderate cost.

It will be found that this Cement, when the instructions for working are carefully followed, will give an effect not only indistinguishable from genuine Caen Stone, but that it becomes much harder than the stone itself. This Cement is made in France, where the art of reproducing stone effects has attained a high degree of perfection and where it is very extensively used.

Owing to the great facility of working, the cost per square foot of wall covered with Caen Stone Cement will be found very reasonable and will make it available for general use. As this Cement can be applied to any surface, it will serve for restorations as well as for new structures. The surface of a wall covered with it can be restored to its original tone, when discolored, by a simple dressing such as is given to it at first.

Directions for using French Caen Stone Cement

There is to be no admixture of any other material whatever in using the cement. It comes ready for use after gauging with pure water. The greatest care should be exercised in mixing and applying, to prevent any foreign matter being introduced which may affect the tone of color produced by the cement itself.

For gauging, the quantity of water must not exceed 30 to 35%, or in other words 50 lbs. of the cement require 1¾ gallons of water. The essential point to observe is that it must be "gauged stiff."

Prepare the cement on a board ; pour water in the above proportions on it and mix well with the trowel, very thoroughly tempering the mortar. The more thoroughly it is tempered the harder it will become.

Thoroughly wet the surface to be covered, applying the cement with the hand and the trowel, compressing it as much as possible. If any cracks appear, slightly moisten and compress with the trowel.

The minimum thickness should be ⅜-in. to ½-in. When sufficiently set, straighten with the straight-edge, then dress with the toothed side of the dressing tool, and lastly with the smooth side. By this means the grain of Caen Stone can be produced. Care should be taken that the tools are sharp. If a finer grain is desired, the surface, after it is thoroughly dried (say 15 days), can be dressed with pumice like natural stone, or even polished like hard stone.

Cut the joints straight with the marker, round or square as desired, to give the appearance of blocks of Caen Stone. The joints may be left hollow or filled with tinted cement—white, gray or black.

Mouldings are run as in any other cement, but to facilitate running them the mortar may be made slightly less stiff.

Castings should be made in glue moulds. Care must be taken to press the stiff-gauged cement into the moulds, as the cement will not get hard if gauged thin.

The best background for Caen Stone Cement is a Keene's Cement mortar well scratched.

□

A THING of beauty is a joy forever:
Its loveliness increases; it will never
Pass into nothingness.—*Keats*.

Victoria Keene's Cement

The Best English Brand

THE characteristics and uses of the various grades carried in stock are as follows:

For Colored face of Artificial Marble.

Superfine—Pure white color, very finely ground and very slow-setting.

For Background of Artificial Marble.

Coarse—Pinkish gray, coarsely ground and very slow-setting.

For Run Mouldings, Cast Ornaments, Finishing Columns, Walls, etc.

Fine—Pure white color, very finely ground and quick-setting.

Victoria Keene's Cement as Ordinary Plaster

For Finishing Walls.

Victoria No. 1—White color, finely ground and medium-setting.

For Gauging Mortar and Finishing Walls when white finishing is not necessary.

Victoria No. 2—Pinkish gray color, medium grinding and setting.

Superfine, Coarse and Fine are in wooden barrels. Nos. 1 and 2 in cloth bags of 100 lbs.

Victoria Keene's Cement for Marble Making Coarse and Superfine

Messrs. Cafferata are in possession of the quarries of rock from which the original and finest Keene's Cement used in the manufacture of artificial marble is made. It is acknowledged by experts that no other has proved satisfactory for this purpose.

The Superfine is characterized by extreme purity of color, enabling the marble maker to bring out to perfection the most delicate tints found in natural and reproduced in artificial marble. Artificial marble composed of this Cement has the same translucency and takes the same high polish as real marble.

The Coarse makes the strongest background for the veined surface of the marble. The adhesion of the two coats forming the slab or column is perfect.

In setting artificial marble Keene's Cement mortar should be used, and not Plaster of Paris or Portland Cement.

Victoria Keene's Cement
Fine for Interior Trim

To meet the demand for a Keene's Cement which can be used economically for run mouldings and for castings, the Fine grade has been manufactured.

It is fine ground, so that it does not rough up under the mould; it is quick-setting (45 to 60 minutes), so that the operative does not waste time in waiting for the set, and it produces the smoothest surface and the sharpest arrises that can be desired.

The base of mouldings may be roughed-out in No. 2 Victoria Keene's or No. 2 Mortar, but the surface should be finished in Fine, to give a smooth and alabaster-like face. When only a thin moulding is required, it is economical to run it entirely in Fine.

With this material mouldings and castings for useful and ornamental purposes can be turned out at a much less cost than with the very slow-setting Superfine, which needlessly consumes the time of the operative in waiting for the set. The effect is in no degree inferior in strength or otherwise.

The use of Keene's Cement in making bases, wainscots, chair-rails, architraves of doors and windows, window-stools, finishing columns, etc., very effectively assists in rendering the building fireproof, by displacing wood trim, and in abolishing vermin which harbors in the joints of woodwork, but to which Keene's Cement trim is absolutely impenetrable.

The cost of Keene's Cement trim is very materially reduced by the use of quick-setting Fine Victoria Keene's. No other material should be used in connection with this grade, and when used as finish it should be placed on a background of Keene's Cement Mortar. In this case the adhesion between ground and finish is perfect.

Bathrooms, kitchens, elevator shafts, etc., finished with it, marked off in imitation of tiles and covered with a good enamel paint, are stronger and more sanitary than tile work.

Much important work has been spoiled by using Portland Cement mortar as a background to Keene's finish, which has thereby been stained or caused to crack and fall off. On the other hand, if Plaster of Paris is mixed with Keene's, the latter will lose strength. Any excuse for such mixture is removed by the fact that Fine Keene's is of its own nature quick-setting. For this reason it should be used for casting ornaments, etc. To secure strongest effect, it should be gauged stiff.

Directions
for using
Victoria Keene's Cement
For Special Sanitary Work, Bath and Toilet Rooms, Kitchens, Wainscots, Elevator Shafts, etc.

Wainscots.—Run base and cap moulding in Fine Victoria Keene's on a foundation of No. 2, and finish the wainscot as follows:

First Coat on Lath.—Take one bag No. 2 to two pails well slaked lime putty and 200 lbs. sand (½ barrel). Use plenty good hair. On brick or terra-cotta use second coat mortar for first coat as follows:

Second Coat.—Take one bag No. 2 Cement to two pails lime putty and 300 lbs. sand.

Finish.—Use Fine Cement without admixture of lime. Trowel the finish smooth, and when it is hard but not quite set, finish with the trowel to a fine glossy surface, which can be left plain or marked off in imitation of tiles. A very fine alabaster effect is produced.

Plain Plastering

Grounds.—On wood lath, ⅜-inch thick; on brick, terra-cotta or metal lath, ½-inch thick. Wood lath should be ⅜-inch apart.

First Coat.—On wood or metal lath. Take equal parts by measure of No. 2 and well slaked lime putty; add three parts sharp sand, also by measure (about 400 lbs. sand to one bag, 100 lbs., cement), and plenty good goat hair. Scratch well and let the wall get hard before applying second coat. On brick or terra-cotta walls use second coat mortar as below for first coat.

Second Coat.—Take equal parts by measure of No. 2 and lime putty and add four parts sand (about 550 lbs. sand to one bag cement).

Smooth Hard Finish.—Take one bag cement to one pail finishing lime putty. Use No. 1 when white wall is desired; No. 2 when pinkish gray will serve. Do not trowel to a finish till nearly set.

Sand Finish.—Float second coat after it has become hard.

Hercules Compound

For Waterproofing Portland Cement

Hercules in Powder

IS very finely ground, and when mixed with a high grade Portland Cement produces absolute impermeability, with increased tensile and compression strength. This form of Waterproofing becomes an integral part of the concrete, is everlasting, gives perfect bond in construction joints, fills all voids in the aggregates, prevents hair cracks, and is the most simple and reasonable methods of waterproofing and strengthening concrete.

Mixed with Portland Cement in the ratio of two pounds Hercules to each bag of cement, it is especially adapted for waterproofing against water pressure.

For Plaster Coat Work, use three pounds Hercules to each bag of Portland Cement.

Hercules Waterproofing is designed for use in the aggregate of concrete walls, floors, foundations, or anywhere where weakness and dampness is a menace to concrete work. It is also used in plaster, for coating and waterproofing old work, for stucco work, and in mortar used in laying blocks, bricks or stone.

Hercules in Powder form is mixed with the dry cement in the proper proportions, before the addition of any other materials with the cement.

Hercules is packed in paper-lined cloth bags of forty pounds each.

Hercules in Paste

Hercules in Paste is a creamy, odorless substance to be dissolved in the gauge water, one gallon of Paste to fifteen gallons of water. In dissolving the Paste, begin by mixing it with an equal part of water, and when thoroughly mixed and thinned, add the remaining water. This milky solution is then used, instead of plain water, to temper the dry mixture of cement and aggregates.

This form of waterproofing is especially adapted to concrete blocks when a wet mix is used, and for large construction work where pouring is done.

The concentrated form of Hercules Paste waterproofing requires the small proportion of 1 gallon Paste to 15 gallons of water, which is much less than any competitive product of similar character, and makes Hercules from 20 to 25 per cent. cheaper.

Hercules Paste Form of Waterproofing has no odor. It weighs practically the same as water, and can therefore be measured either by weight or volume. Being so nearly the same specific gravity as water, it stays in suspension better than any other Paste Waterproofing, permeates the concrete mix more thoroughly, and thus gives it an important element of safety.

Hercules is sold by net weight, packed in kegs of ten, twenty and thirty gallons each, about nine lbs. to a gallon, and in barrels containing fifty gallons.

Hercules in Liquid

Hercules Waterproofing in Liquid Form is a thin, colorless fluid to be applied to the surface of Concrete Stucco, Plaster, Brick, etc., which is already erected and in place, and is not intended for mixing with the cement.

Hercules Liquid Form of Waterproofing is especially adapted for erected structures which are subject to dampness caused by atmospheric conditions. It is not recommended for waterproofing structures below the level of the ground, which are subject to heavy water pressure. It is especially adapted for the coating of Cement Floors, keeping them dry and preventing the dusting. It prevents efflorescence on brick and stone.

The waterproofing solids of Hercules Liquid are held together by a volatile oil, which, when applied, evaporates and leaves only the waterproofing solids. There is therefore no surface coating to peel or wear off; on the contrary, the solids are carried into the porous structure from $\frac{1}{8}$ to $\frac{1}{2}$inch, and the sun has no tendency to draw the solids from the surface. The heat of the sun on the structure simply promotes the continual penetration of the waterproofing solids.

The surface to which Hercules Liquid is applied must be dry and clean at the time of the application. A soft brush should be used for applying the Liquid, and two coats given the surface; the second coat about six hours after the first. One gallon covers approximately 125 square feet one coat, varying with the porosity of the structures.

Hercules Liquid should be thoroughly stirred before using, and if it is thicker than water at the time of application, it should be warmed by placing it in a heated room, in the sun, or in hot water, but not over or near a flame, as the volatile oil is explosive.

"Hercules" Liquid Form is packed in boxed tin cans of five and ten gallons each. Also in barrels of 50 gallons.

Concrete Floor Paint

THIS Paint removes all objectionable features in concrete floors. It completely fills the pores of the concrete, thus preventing the floors from being damp and unsanitary, and suppresses the disagreeable dust, which is generally the greatest objection to Concrete floors.

Concrete Floor Paint is attractive, practical and economical. Concrete floors treated with this Paint do not become discolored, and are much easier to keep clean than the ordinary floors.

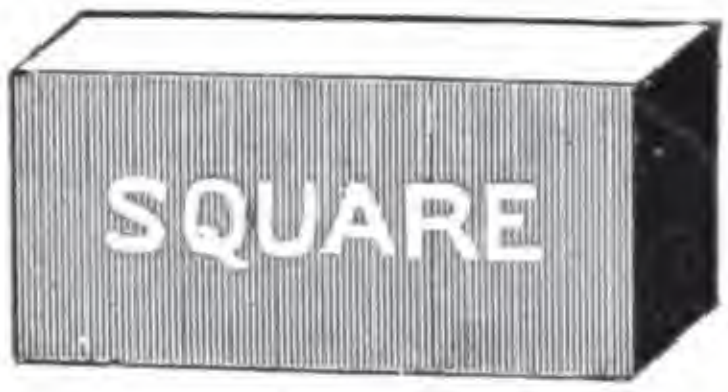
To ensure sanitary, dry, dustless and smooth concrete floors, it is indispensable to apply this paint.

Concrete Floor Paint is prepared in liquid form, ready for using, in the following colors :

Grey	Light Red
Slate	Dark Red
Stone	Olive

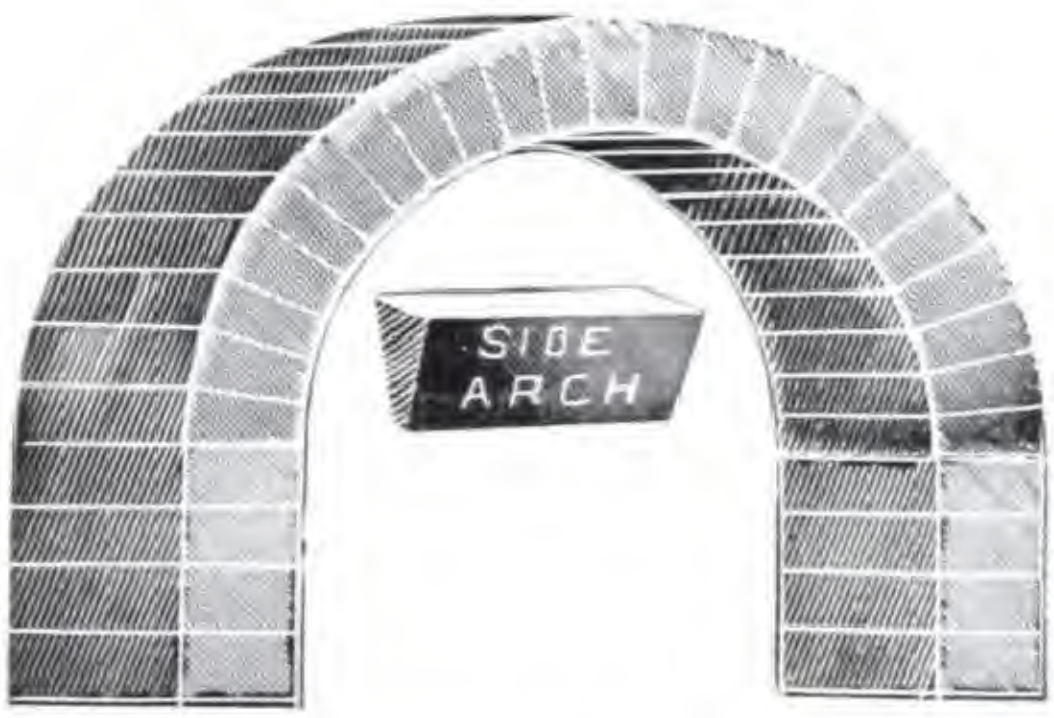
Fire Brick

WE constantly carry a large and complete stock of the leading brands of Scotch, English and American Fire Brick in the following shapes and sizes:



9 x 4½ x 2½

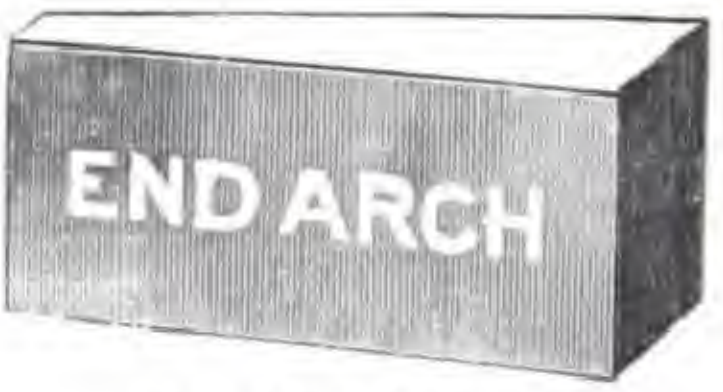
9 x 4½ x 2½ x 2
9 x 4½ x 2½ x 1½



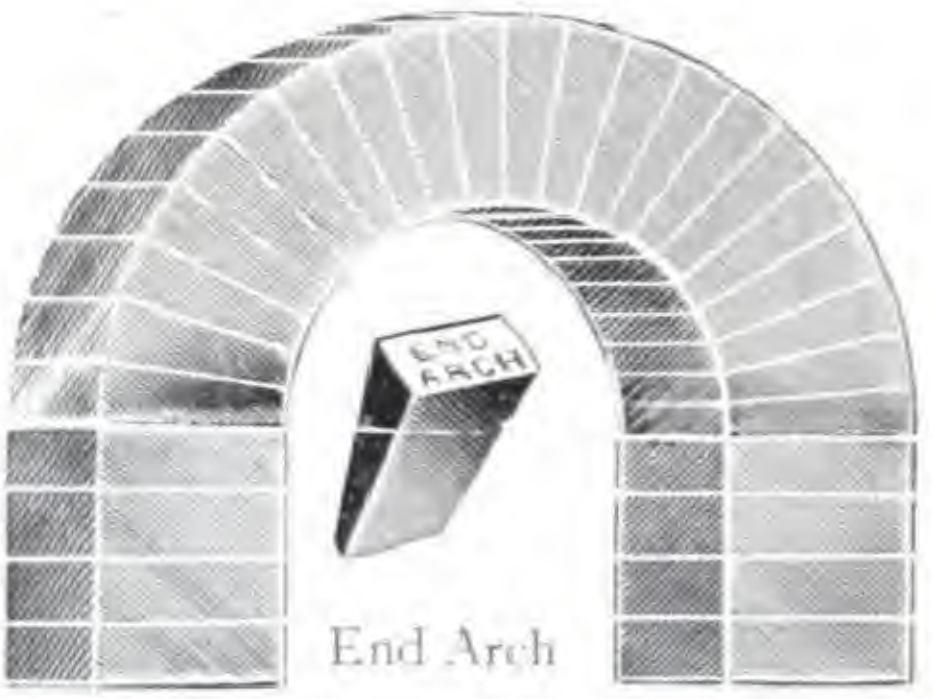
Side Arch.

9 in. x 4½ in. x 2½ in. x 1½ in. 28 Bricks form Circle 15 in. inside.

9 in. x 4½ in. x 2½ in. x 2 in. 55 Bricks form Circle 36 in. inside.



9 x 4½ x 2½ x 2
9 x 4½ x 2½ x 1½



End Arch

9 in. x 4½ in. x 2½ in. x 1½ in. 55 Bricks form Circle 30 in. inside

9 in. x 4½ in. x 2½ in. x 2 in. 108 Bricks form Circle 66 in. wide.

Cupola.

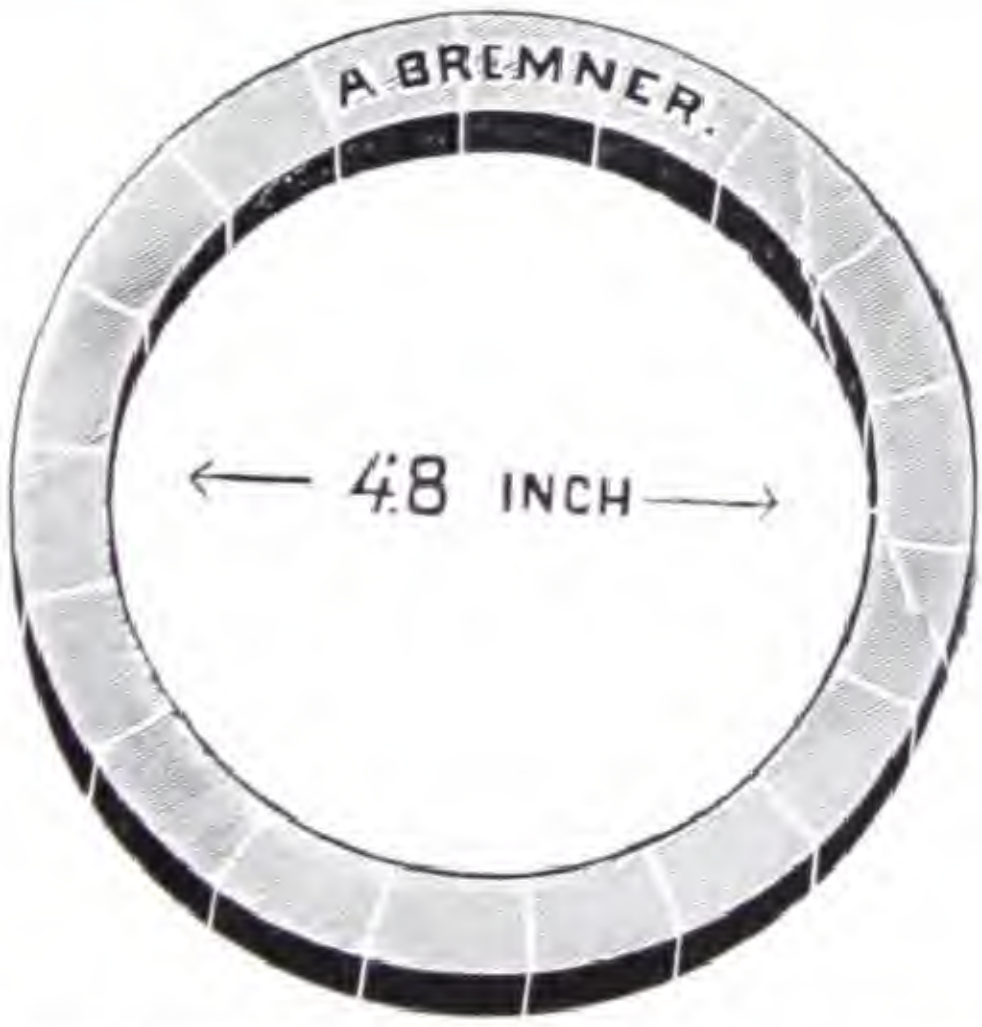
9 in. x 4½ in. x 2 in. x 2½ in. 25 Bricks form Circle 18 in. inside.

9 in. x 4½ in. x 2½ in. x 2½ in. 28 Bricks form Circle 24 in. inside.

9 in. x 4½ in. x 3 in. x 2½ in. 38 Bricks form Circle 35 in. inside.

11 Bricks form Circle 24 in. inside diameter and 33 in. outside diameter.

14 Bricks form Circle 36 in. inside diameter and 45 in. outside diameter.



18 Bricks form Circle 48 in. inside diameter and 57 in. outside diameter

Circles of intermediate diameters can be made by combining the sizes.

9 x 2½ x 2¼

9 x 4½ x 1
9 x 4½ x 1¼
9 x 4½ x 1½

Bull Nose
9 x 4½ x 2½

Feather Edge
9 x 4½ x 2½ x 0

Feather End
9 x 4½ x 2½ x 0

Side Skew
9 x 4½ x 4½ x 2½

End Skew
9 x 7 x 4½ x 2½

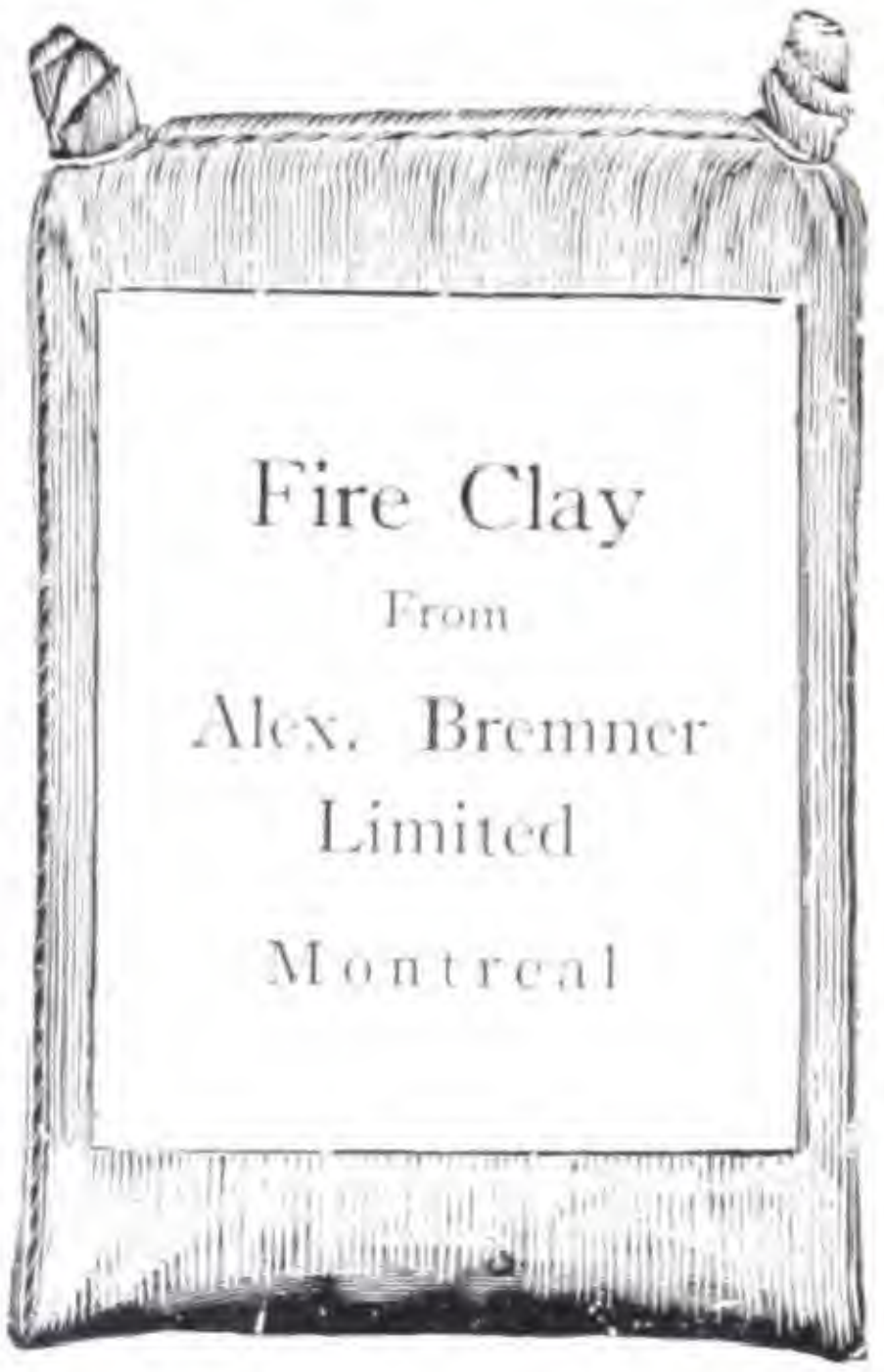
Locomotive Blocks and other Special Bricks made to order from sketch or blue prints.

Fire Clay Tiles

Length	Width	Thickness	Weight
6 inches	6 inches	1 inch	2 lbs.
7 "	6 "	1 "	3 "
8 "	5 "	1 "	3 "
8 "	6 "	1 "	3 "
9 "	6 "	1 "	3 "
9 "	9 "	1½"	9 "
10 "	7 "	1 "	5 "
12 "	12 "	1½"	17 "
12 "	6 "	2 "	10½ "
12 "	12 "	2 "	20 "
15 "	12 "	2 "	28 "
15 "	12 "	3 "	42 "
18 "	7 "	1 "	12 "
18 "	7 "	1¼"	14 "
18 "	7 "	2 "	16½"
18 "	9 "	2 "	21 "
18 "	12 "	2 "	30 "
18 "	12 "	3 "	45 "
18 "	15 "	3 "	50 "
18 "	18 "	1½"	35 "
18 "	18 "	3 "	65 "
24 "	12 "	3 "	60 "
24 "	15 "	3 "	73 "
24 "	18 "	3 "	88 "
24 "	24 "	3 "	121 "
30 "	12 "	3 "	76 "
30 "	15 "	3 "	95 "
30 "	18 "	3 "	110 "
30 "	20 "	3 "	126 "
33 "	12 "	3 "	90 "
33 "	15 "	3 "	110 "
36 "	18 "	3 "	134 "
36 "	20 "	3 "	151 "
36 "	24 "	3 "	180 "

Sizes not enumerated made to order.

Fire Clay



In the following grades in bags.

Scotch Clay	American Jersey Clay
Scotch Gannister	American Ohio Clay

Quantity of clay to lay 1,000 Bricks.—When dipped, 2 bags; when as Mortar, 4 bags; or 1 ton for 3,000 fire-bricks.

Etna Cupola Daub Clay

A mixture of Fire Clay and Fire Sand, specially suitable for daubing Cupolas and similar work.

Supplied in bulk, in barge or car-loads, and in smaller quantities.

Stove Linings

SIZES of Flat Fire Bricks generally used for lining Stoves:

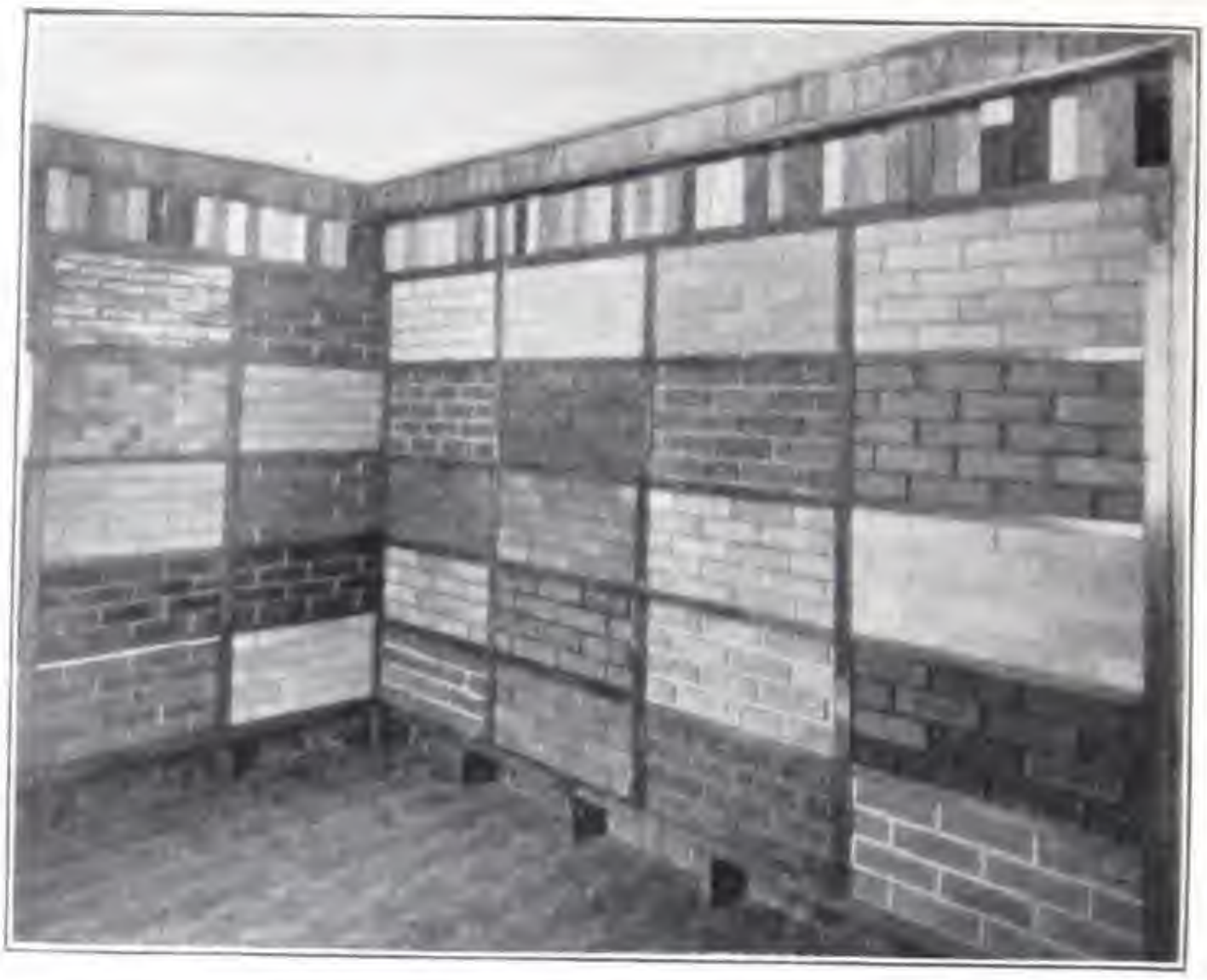
6 x 6 x 1	9 x 6 x 1
7 x 6 x 1	18 x 7 x 1
8 x 6 x 1	18 x 7 x 1¼

Additional sizes carried in stock and special sizes made to order.

Asbestos Stove Clay

A dry, plastic, durable Fireproof mixture, in packages. Specially recommended for making and repairing lining in coal stoves, furnaces and ranges.

Mix with water into a stiff mortar and apply to stove after removing dust.



Face Brick Contrast in our Head Office Show Room

Facing Brick

THE employment of brick for constructive purposes extends back some thousands of years previous to the Christian era, recalling to memory the exaction of the Egyptian taskmasters in demanding from their bondmen the full tale of brick while depriving them of the necessary straw.

Unlike many other materials which have been introduced in building and which have been transient, brick established its permanancy and at the present time is steadily increasing in favor.

The many advantageous qualities of brick particularly recommend it to Architects and Builders. It is durable, attractive and economical.

Its importance has attracted the attention and interest of capitalists and enthusiasts to its manufacture, who, by the introduction of the latest discoveries in science, art and machinery, now produce Brick of every desired shape, color and texture.

The many beautiful colors and shades of the high-class Facing Brick have inspired Architects to introduce artistic designs in their plans. These, when carefully executed with a combination of harmonious colors, shades and textures, are very ornamental and attractive, and, like good paintings, improve upon repeated viewing.

American Facing Brick

A few of the leading Facing Brick Manufacturers whom we represent :

Hydraulic Press Brick Co.

Hy-tex

Ohio Iron Spots, smooth surface.
Golden Rod Matts, rough surface.

In seven shades, from light buff to dark brown, interspersed with spots of a darker color.

Bokhara Rugs, rough surface, in the following shades :

Light Red	Bronze
Medium Red	Blue
Dark Red	Green
Brown	Antique

Supplied in one shade or in a regular proportion of the several shades, or in a special percentage of each shade, as desired.

Hy-tex Kittanning, smooth wire cut or repressed.

Light Buff	Light Grey
Medium Buff	Dark Grey
Dark Buff	Steel Grey

Upper Kittanning Brick Co.

Smooth or Rough face, in the following shades :

Light Buff	Light Grey
Medium Buff	Medium Grey
Dark Buff	Dark Grey
Orange	Brown

The Everhard Co.

Double texture rough faced, in thirteen shades, light, medium and dark.

Supplied in one shade or assorted.

Coshocton Brick Co.

In five original shades of artistic beauty, with blending colors and mottled effects.

□

Directions for Cleaning Brickwork

Do not attempt to clean the brickwork until after the mortar has had a chance to dry out.

After the mortar is thoroughly dry, wash the brickwork with the preparation given below, using a brush or sponge.

For Red, Brown or Pink Brick, use a mixture of Rosin Oil and Naptha : two-thirds Oil and one-third Naphtha.

For Cream, Buff and Grey Brick, use a mixture of equal parts of Muriatic Acid and Water.

□

Bricks like genuine unselfish friendship,
Retain adhesion when well cemented;
In severe tests they steadfastly
Cling and defeat their enemy.
Keep this simile ever in view,
Stick to your friends and to yourself be true.

Scotch Fire Brick

For Building Purposes

THE use of Scotch Fire Brick for the facing of Buildings is constantly increasing, on account of its beauty and durability.

In addition to our regular lines of Fire Brick, we carry the following brands, which we specially recommend for facing :

Castlecary

A rich brown colored brick, mottled with spots of a darker color.

Glennox

The same as Castlecary, but machine pressed instead of ordinary moulded.

Cairn

A machine moulded brick of light buff color, with flashings of a darker color.

Etna

A dark buff colored brick, with a profusion of large darker colored markings.

Fire-places

THE indispensableness of a Fire-place in every modern residence is now fully realized, and it is the ambition of everyone possessing esthetic taste to make the Fire-place conform to the beauty and attractiveness of its surroundings.

A cheerful fire, spreading its comforting heat from an open Fire-place, awakens happy and pleasant reminiscenses in the minds of the aged, when surrounded by their family and friends. How eagerly and with what pleasure the children listen to and absorb the wonrdous tales of the past, while the fitful crackling and sparkling of the fire create in the young people thoughts with visions of ecstatic bliss by their betokenings of the future.

From the variety of shapes and colors of the Face Brick we carry in Stock, handsome and pleasing combinations can be made.

Brick, being fire resistive, is the approved material for Fire-places. We specially select all brick designed for this purpose.

In addition to our regular sizes and colors, we have the following special sizes :

6 x 2	x 2	Buff
6 x 2	x 2	Mottled
8 x 1¼	x 2½	Buff
8 x 1¼	x 2½	Mottled
9 x 2½	x 2¼	Mottled

THE fire with well dried logs supplied,
Went roaring up the chimney wide;
The huge hall-table's oaken face
Scrubbed till it shone the day to grace

Enamelled Brick

WE keep constantly in stock a variety of English, Scotch and American Enamelled Brick, from well-known and reliable manufacturers, in the following shades and colors :

White	Light Brown
Cream	Dark Brown
Light Blue	Brown, Mottled
Dark Blue	Light Green
Blue, Mottled	Dark Green
Buff	Chocolate

The following are the designations of the enamelling :

Single Stretcher, one side.
Double Stretcher, both sides.
Single Quoin, one side and one end.
Double Quoin, both sides and both ends.
Single Header, one end.
Double Header, both ends.
Bull Nose, one side and round corner end.

The Standard sizes are :

English and Scotch Brick

9 x 4 3/8 x 2 7/8 and 9 x 4 3/8 x 3 1/8

American Brick

9 x 4 3/8 x 2 7/8 and 8 3/4 x 4 1/16 x 2 1/4

Large size Flat Tiles and Bricks of other sizes and other Enamelling are also manufactured.

Paving Brick

For Paving Streets, Street Crossings, Walks, Driveways, Bridges, etc.

Durable—Sanitary—Economical

STREETS properly laid with Vitrified Paving Brick in large business Cities have endured heavy and constant traffic for over twenty years without cost for repairing, and their present condition warrants their wear for an additional fifty years. This is indisputable evidence of its durability and economy.

The smooth surface of Vitrified Brick produces no dust and prevents the adhesion of dirt. The brick is easily flushed and dries quickly.

Vitrified Brick Paving gives a sure footing for horses and removes the liability of the skidding of automobiles.

Vitrified Brick Walks add beauty to green lawns, shrubs and flowers.

The longest concrete bridge in the world is paved with Vitrified Brick. This is a strong testimonial as to its superior qualities for bridge paving.

Vitrified Brick Paving is not affected by climatic changes and, when properly laid, becomes monolithic.

Adamantine Paving Brick

ADAMANTINE Brick is designed specially for paving Stables, Coach-houses, Garages, and all Structures where an extra hard and durable material is required.

Adamantine Paving Brick

Blue

Size, $9\frac{1}{4}$ x $4\frac{1}{2}$ x $2\frac{1}{2}$. Weight, about 9 lbs.

$8\frac{3}{4}$ x $8\frac{1}{4}$ x $2\frac{1}{2}$ in.

Adamantine Paving Clinkers

Chamfered or plain edges.

Buff

Size, 6 x $1\frac{3}{4}$ x $2\frac{1}{4}$. Weight 2 lbs.

Shale Building Brick

MADE from Shale, wire cut, and burnt in modern kilns. This brick is hard and durable and besides being used for general constructive purposes, is especially suitable for sewer building.

Our facilities enable us to fill all orders promptly and at close prices.

Ordinary Clay Brick

We supply this brick all hard or all soft, or regularly assorted in the following proportions :

$\frac{3}{4}$	hard	$\frac{1}{4}$	soft.
$\frac{2}{3}$	"	$\frac{1}{3}$	"
$\frac{1}{2}$	"	$\frac{1}{2}$	"
$\frac{2}{3}$	soft	$\frac{1}{3}$	hard.
$\frac{3}{4}$	"	$\frac{1}{4}$	"

Vulcan Roofing

Ready for Laying

VULCAN Roofing is a strong, long-fibre, all-wool felt, thoroughly impregnated with a non-volatile compound, thus making a tough, pliable fabric of extraordinary strength. It is absolutely impervious to all elements. Both sides being heavily coated, it is rendered water, wind and weather proof.

No additional coating is required, when laying, with the exception of cement between laps and of painting tops of laps and heads of nails.

Vulcan is practically fireproof, resists excessive heat, and live embers or hot coals have practically no effect upon it.

Vulcan is adapted to every kind of building and every style of roof that sheds water freely.

Vulcan is easily applied and does not require skilled labor or special tools. The directions for laying accompany each roll.

Vulcan Roofing is 36 inches wide—a practical width for handling and laying. It is put up in rolls, with cement for laps and nails packed in centre of roll.

To meet different roofing requirements, Vulcan is made in three weights, one, two, and three-ply. The wear on roofing being from the surface inward, the thicker fabric and heavier impregnation offer greater resistance and longer service.

Rolls of one, two, and three-ply are 108 square feet each, and, allowing for laps, a roll will cover 100 square feet.

Each roll is furnished complete with nails and cement for laps, and weighs approximately as follows :

One-ply, 35 lbs ; two-ply, 44 lbs ; three-ply, 55 lbs.

Directions for Laying Vulcan Roofing

The roof boards must be dry, of uniform thickness, free from protruding nails, knots, etc., and laid close together, but do not require to be planed or tongued and grooved. Cover all knot holes with sheet tin or small pieces of roofing.

Cut roofing to required length, allowing for flashing or turning over on gable ends.

Begin at eaves or gutter and lay first course parallel to and lapping over the eaves, turn down outer edge and secure it with nails or, preferably, wooden strips thoroughly nailed. Lap second sheet two inches over first, cementing thoroughly between the laps.

Nail every two and one half inches, about one inch from the edge of the sheet. Do not drive nails in cracks or knots.

Begin nailing at centre of sheet and continue toward each end.

Splices should be lapped four inches, thoroughly cemented between each lap and fastened with two rows of nails. Spliced joints must not come at the same place on adjoining courses. Apply an additional layer of roofing to cap ridge.

A strip of wood two inches wide and one inch thick, nailed along eaves and gables, adds to the security of the roofing.

For flashing around walls and chimneys, turn roofing up against the wall or chimney about four inches; cut a separate strip of roofing eight or ten inches wide, lapping one half on the roof and the other half on the wall. Fasten the upper edge with wooden strips to the wall or chimney; thoroughly cement the strips and upper ledge; cement the lower lap and nail securely.

If gutter and valleys are to be lined with the roofing, use a separate strip in the bend. Cement thoroughly between laps, nail closely, and apply extra cement on tops of laps and heads of nails.

At all tin or other metal connections, the roofing must be carefully cemented and nailed. All flashings must be well cemented.

When laying is completed, paint tops of all laps and head of nails with cement.

Vulcan can be laid over shingles, also over metal, composition or felt roofing, and will be found the cheapest and most satisfactory means of making an old roof water-tight and good for many years of added service.

Vulcan Roofing, as manufactured and without additional coating, will outwear all ordinary roofings.

Building Paper

Ordinary Dry or Untarred Sheeting

In rolls 32 inches wide.
400 square feet in roll.

Heavy Dry or Untarred Straw Sheeting

In rolls 32 inches wide.
400 square feet in roll.

Extra Heavy Dry Untarred Fibre Sheeting

In rolls 32 and 64 inches wide.

Ordinary Tarred Sheeting

In rolls 32 inches wide.
400 square feet in roll.

Heavy Tarred Straw Sheeting

In rolls 32 inches wide.
400 square feet in roll.

Tarred Felt

7 oz.	Weight,	11 lbs.	per roll of	100 square feet
8 "	"	13 "	" "	100 " "
10 "	"	17 "	" "	100 " "
12 "	"	19 "	" "	100 " "
14 "	"	22 "	" "	100 " "
16 "	"	25 "	" "	100 " "

Cement Finishing Tools

Bronze Indentation or Dot Roller

Turned and milled, with handle 5 inches long.

4 inches long, 3⅜ inches diameter
6 " " 3⅜ " "
8 " " 3⅜ " "
10 " " 3⅜ " "
12 " " 3⅜ " "

Iron Indentation Roller

Made from best Grey Iron, turned and milled, Bronze-plated; with wooden handle, 12 inches long.

6 inches long, 3⅜ inches diameter.
8 " " 3⅜ " "

Cast Iron Dot Roller, No. 25

Aluminum finish Roller 6 inches long; with iron handle 5 inches long, or with wooden handle 5 feet long.

Line Roller, No. 26

Grey iron Roller 6 inches long, 3 1/8 inches diameter
" " " 8 " " 3 1/8 " "

Driveway Roller, No. 27

Makes indentation 2 inches long, 3/8 inch wide, and 2 inches apart.

Roller 6 inches long, 4 inches diameter
" 8 " " 4 " "

Brass Extension Ferrule

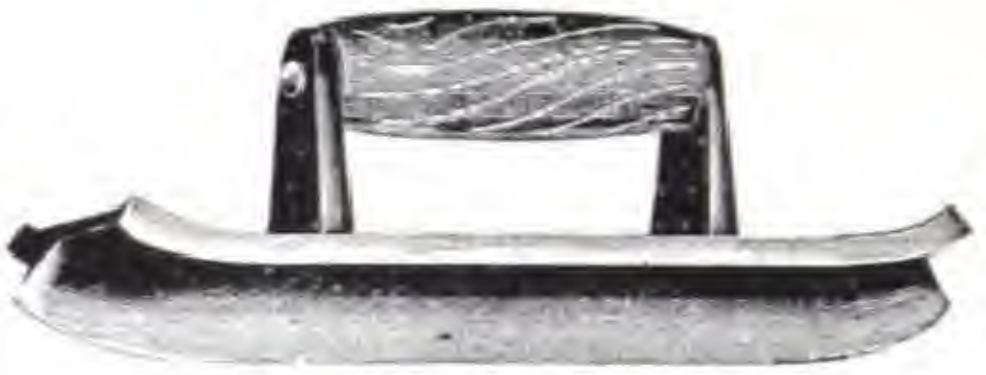
Attachable to short handled Dot Rollers.

Steel Trowel

4 1/4 x 11 1/2 x 18 gauge

Wood Floats

Made from selected Cypress, 4 1/2 x 16 inches.



Jointer, No. 1

9 x 3 inches, ½ inch radius ; cuts groove ¾ inch deep

Jointer, No. 2

5½ x 3 inches ; cuts groove ½ inch deep.

Jointer, No. 3

5¾ x 3 inches ; cuts groove ½ inch deep.

Jointer, No. 7

7¾ x 4½ inches, ⅝ inch radius; cuts groove 1 inch deep.

Jointer, No. 10

5½ x 5 ins. ⅝ in. radius ; cuts groove 11-16 in. deep

Jointers and Edgers are either Grey Iron, Nickel-plated, or solid Bronze.

Nickel-plated supplied unless otherwise instructed.

Jointer, No. 12

7 x 6 inches ; cuts groove 7-8 inch deep.

Jointer and Liner, No. 14

5½ x 5½ inches, ⅜ radius ; cuts groove 13-16 inch deep.

Edger, No. 4

5¾ x 2¾ inches, ⅜ inch radius.

Edger, No. 5

8¾ x 2¾ inches, ⅜ inch radius.

Edger, No. 6

7½ x 3½ inches, ⅝ inch radius.

Jointers and Edgers are either Grey Iron, Nickel-plated, or solid Bronze.

Nickel-plated supplied unless otherwise instructed.

Edger, No. 8

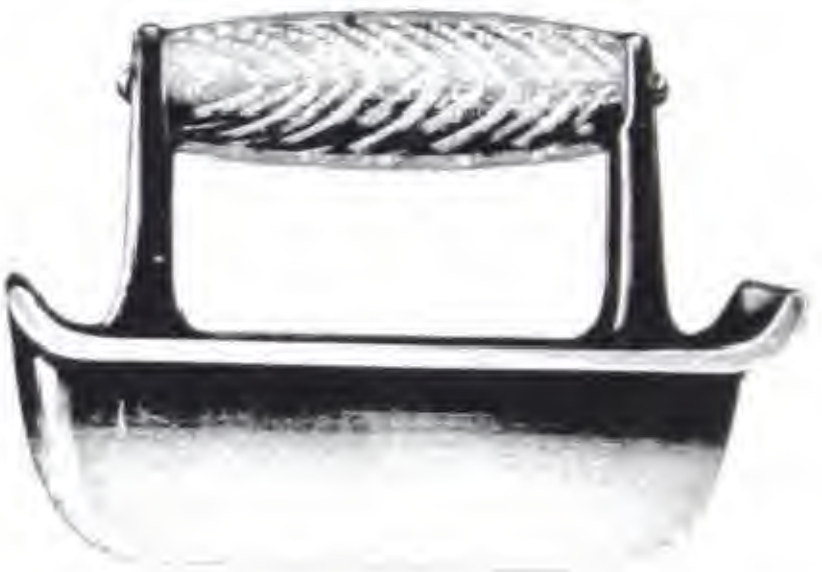
5½ x 2½ inches, 11-16 inch radius.

Edger, No. 9

5¼ x 3½ inches, ¾ inch radius.

Edger, No. 11

6 x 3 inches, ⅞ inch radius.



Large Curb Edger, No. 13

6½ x 3¾ inches, 1½ inch radius.

Edger and Liner, No. 15

6 x 3 inches, 1 inch radius.

Jointers and Edgers are either Grey Iron, Nickel-plated, or solid Bronze,

Nickel-plated supplied unless otherwise instructed.

Round,
6 inches diameter
Weight 17 lbs.

Cement or Earth Pounders

Square,
7 x 7 inches
Weight 14½ lbs.

Clay Pick

Mortar Hoe

10 x 6 inches

Road Scraper

13½ x 5½ inches

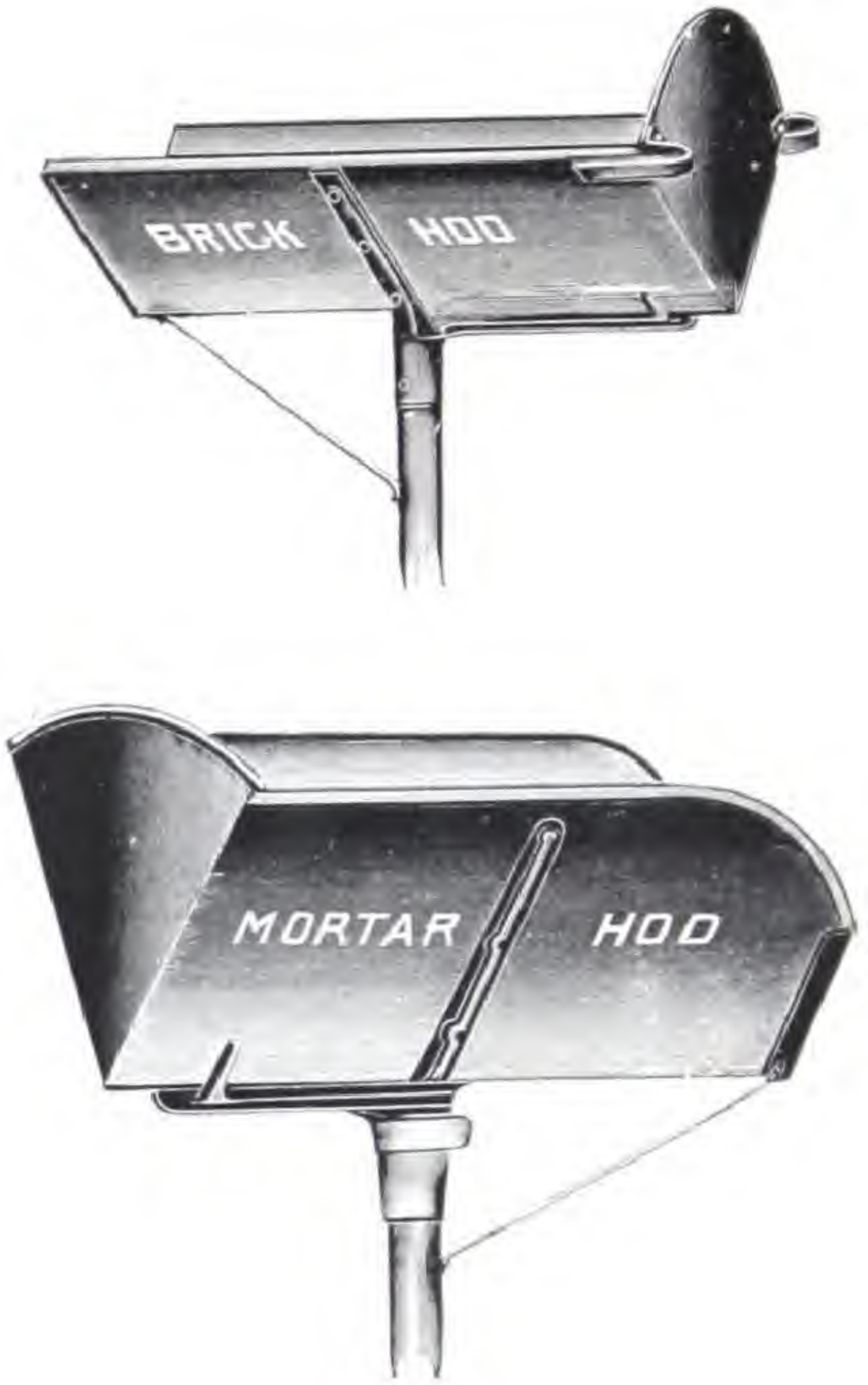
Square Point
D Handle

Round Point
D handle

Shovels

Brick and Mortar Hods

Made of well seasoned wood and strongly ironed.
Also, of pressed steel.



Hand Barrow

Light and strong; made by hand and of specially selected wood.

Ladders

For Painters

Rungs 12 ins. apart

For Bricklayers

Rungs 8 ins. apart

STRONGLY made of natural wood, in lengths from 15 to 40 feet.

Extension Ladders

Two-piece Extension Ladders, with rope and pulleys, made of selected hardwood and sides re-inforced by steel rods, 20 to 44 feet; three-piece, 46 to 60 feet.

Plasterers' Furnaces

With or without cover

Height, 30 inches. Diameter, 18 inches.

Of sheet steel, with heavy grates, well made and very durable.

Railroad or Navvy Barrow

Fig. 1.

Full Bolted

Full sized, bent wooden tray ; planed, cleated, nailed and strapped together. Legs, handles and braces made of seasoned hardwood ; planed and smoothly finished. Knocks down for shipment; easy to set up. Supplied with either wooden or steel wheel. Weight, 50 lbs.

Navvy Barrow

Fig. 3.

Common Bolted

A cheaper barrow than our full bolted Navvy Barrow, with bent wooden tray nailed to handles; legs and braces bolted. Supplied with either wooden or steel wheel. Knocks down for shipment and sets up easily. Weight, 45 lbs.

Canadian Steel Tray Barrow

Fig. 26

Wooden Frame, Steel Pan and Wheel

The tray is stamped out of a single sheet, without seams or rivets. Length on top, 32 inches; width, 33½ inches; depth at handles, 8 inches; depth at wheel, 11½ inches. The frame of well seasoned hardwood is securely bolted and finished. The bevelled piece of wood under tray on top of handles raises the tray well up in front. Knocks down for shipment. Weight, 50 lbs.

Comet Steel Tray Barrow

Fig. 27

The tray is stamped out of a single sheet of steel, without joint or rivet, with the edge bound over a heavy rod. Handles, legs and braces are of hardwood, well bolted and braced. The wheel is 16½ inches in diameter, 1½ x ¼-inch tire, 5-16 spokes, 6-inch hub. Knocks down for shipment. Weight, 40 lbs.

Steel Tray Barrows

Fig. 25

Wooden Frame

The tray is stamped out of a single sheet, without joint, seam or rivet, with flange turned over a steel rod. The wooden frame is of thoroughly seasoned hardwood, well finished and firmly put together. The bevelled piece of wood under tray on top of handles raises the tray well up in front. Knocks down for shipment. Supplied with steel wheel.

Four Sizes

Dimensions, Capacity, Weight, Etc.

No.	Length on Top	Width on Top	Depth at Wheel	Depth at Handles	Capacity	Weight
0	32 ins.	28 ins.	7 ins.	5 ins.	3 cubic ft.	50 lbs.
1	36 "	29 "	7 "	5 "	3½ "	60 "
2	39 "	32 "	8½ "	6 "	5 "	60 "
3	42 "	34 "	11½ "	8 "	7 "	75 "

Stone Barrow

Bent Handle

Fig. 19

Wooden

This barrow is made from best materials, well ironed, braced, bolted and painted. Supplied with wooden or steel wheel. Weight, 75 lbs.

Crown Mortar Barrow

Fig. 30

Wooden tray and frame, made from selected hardwood, firmly nailed and iron strapped at the corners and on the top edges. Size of tray—on top 31 x 28½ inches ; on bottom 19 x 17½ inches ; depth at front 14 inches, at back 8½ inches. Supplied with either wooden or steel wheel. Weight, 65 lbs.

Garden Barrows

Fig. 42

Removable Sides

Two Sizes

Made of seasoned hardwood, nicely painted, striped and varnished; braced and bolted ; steel wheel.

No. 1. Front, 11½ inches; Sides, 10 inches.
" 2. " 15 " " 14 "

Weight, No. 1, 50 lbs.
" No. 2, 60 "

Tubular Steel Barrows

Fig. 23.

With Wheel Guard

Five Sizes

Dimensions, Capacity, Weight, etc.

No.	Length on Top	Width on Top	Depth at Wheel	Depth at Handle	Capacity	Weight
0	32 ins.	28 ins.	7 ins.	5 ins.	3 cubic ft.	65 lbs
1	35 "	29 "	8 "	5 "	3½ "	70 "
2	39 "	32 "	8½ "	6 "	5 "	75 "
3	42 "	34 "	11½ "	8 "	7 "	100 "
4	42 "	34 "	11½ "	8 "	7 "	110 "

No. 2

Sterling Barrow

Fig. 182

Steel Tray, Forward Dump

This barrow was designed for charging concrete mixers and has proved a positive success. The steel tray is supported by a malleable iron arch brace. Hardwood handles painted red. Capacity, 4½ cubic feet dry material. Weight, 65 lbs.

No. 4

Sterling Barrow

Fig. 184.

All Steel, Forward Dump

Will carry the heaviest load with greater ease than any other barrow. Continuous tubular frame forms handles, tray support, wheel support and wheel guard. Capacity, 4 cubic feet. Weight, 65 lbs.

No. 3

Sterling Barrow

Fig. 183.

Steel Tray

This barrow is a general favorite with contractors. Capacity, 3 cubic feet. Weight, 50 lbs. Hardwood handles and legs.

Note improved construction of handles, which secures them from the possibility of breaking.

No. 6

Sterling Barrow

Fig. 186.

Steel Tray

This barrow will hold over twice the load of an ordinary pan-shaped barrow. The hardwood frame is painted red and metal tipped; its extension past the wheel enables operative to empty barrow over the end or side. Weight, 60 lbs.

No. 1

Sterling Concrete Cart

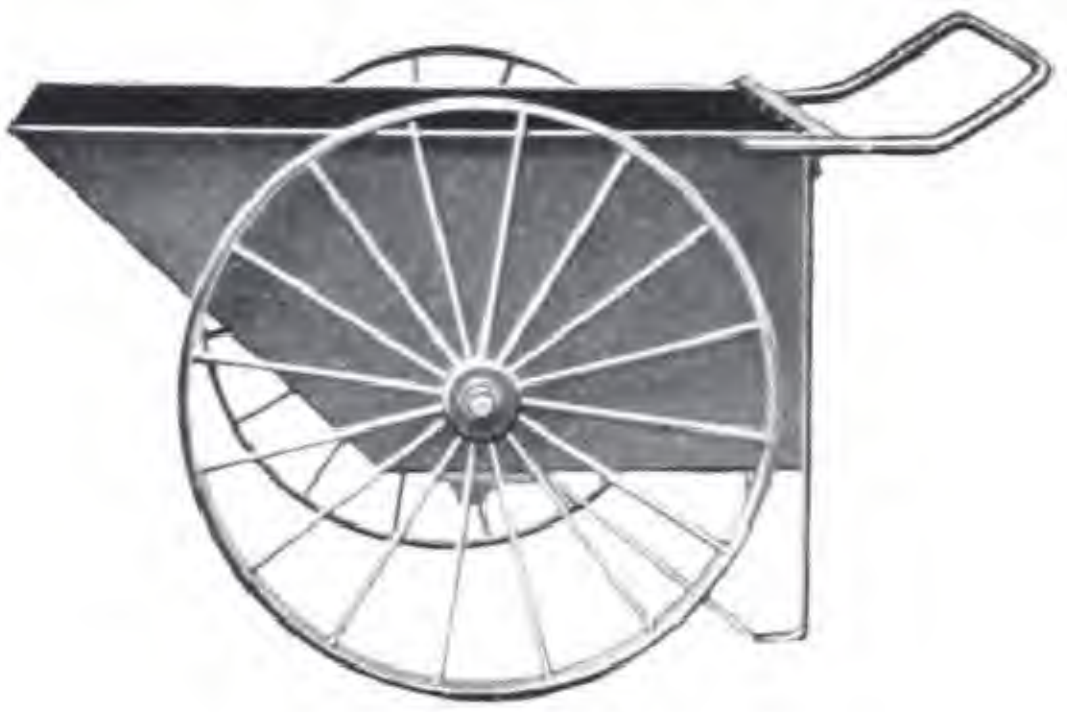


Fig. 200

Capacity, 6 cubic feet thin, sloppy concrete, or 7 cubic feet dry material. Weight, 200 lbs. Tray 14 gauge steel re-inforced with angle iron around entire top edge, forged corners. Heavy steel legs. Roller-bearing wheels. Sixteen ½ inch staggered spokes in tension. 2 inch tires, 30 inch diameter. Grey iron hubs. 1¼ inch bent axles.

Drag Scrapers

Fig. 70

Pressed Steel

THESE scrapers embody all the latest improvements and are made of the best materials obtainable. They are stamped from new and improved dies. The bails are of the newest pattern, with strong and perfect working swivels. They handle and fill easily, have light draft, and are readily dumped. Contractors pronounce them the best on the market for strength, shape and finish.

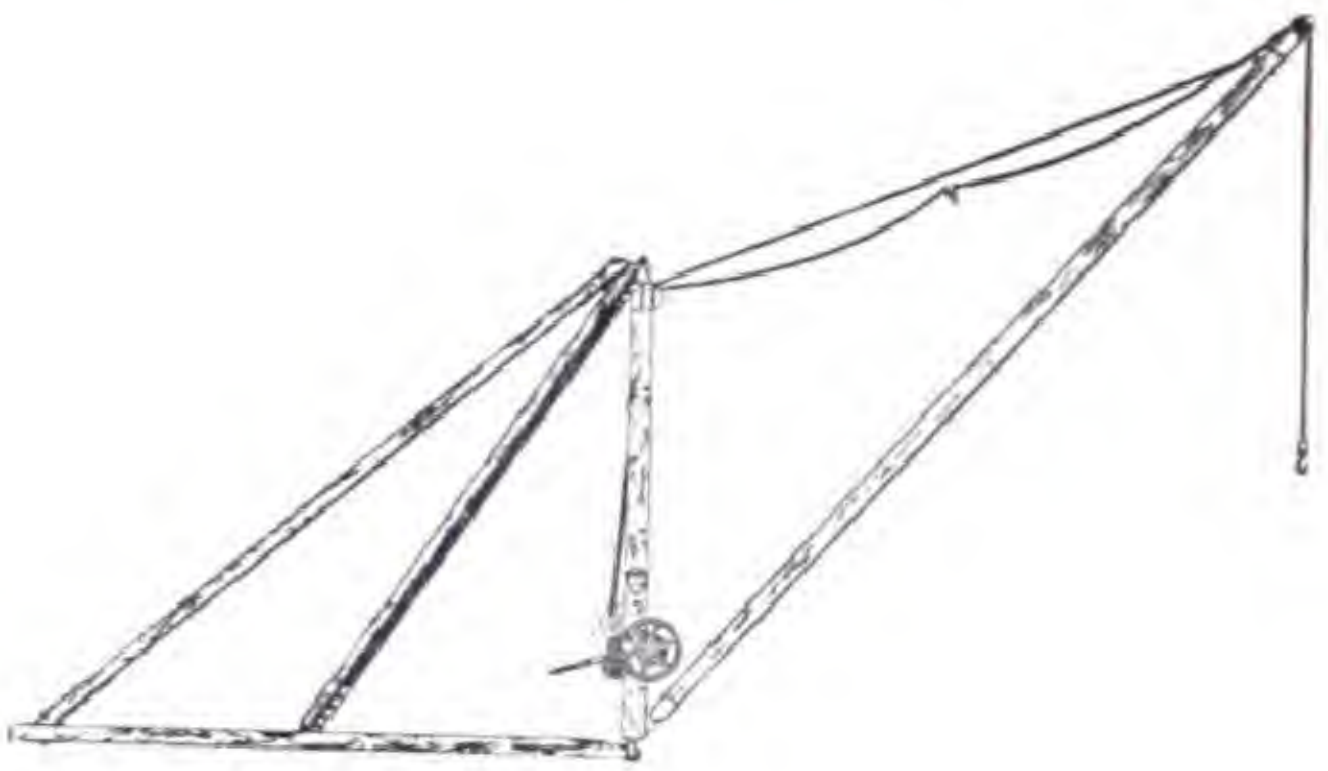
With two runners or heavy bottom plate, as required.

If not otherwise ordered, we assume without runners or bottom plate.

When ordering, please state whether handles on top or sides are wanted.

No.	Capacity	Length of Bowl	Width	Depth	Weight
1	7 cubic ft.	33½ ins.	32 ins.	11½ ins.	102 lbs.
2	5 " "	31½ "	29 "	11½ "	94 "
3	3 " "	31 "	25 "	11½ "	70 "

Scotch Derrick



With Patent Safety Device

From one to twenty tons capacity.

Length of jibs up to seventy feet.

These Derricks are made of the best materials by skilful workmen.

The arrangement of catch falling into the ratchet cast on end of jib barrel relieves spur wheels of strain and removes the liability of slipping.

We furnish centre mast entire ; but iron work only for completion of derrick.

Index

AB
LIMITED.